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Diagnostic Patterns of Care
October 1989

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OPTIMIZING DIAGNOSTIC PATTERNS OF CARE

in

DEPARTMENT OF VETERANS AFFAIRS MEDICAL CENTERS

by

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OPTIMIZING DIAGNOSTIC PATTERNS OF CARE IN VETERANS AFFAIRS MEDICAL CENTERS

SECTION I

Executive Summary

Background and Purpose

This monograph is the result of four years of study and collaborative effort on the part of Pathology and Laboratory Medicine Service and VA medical center physicians to find an alternative to the random, "shotgun," non-specific test ordering and drug ordering practices that result in overutilization and wasted resources in VA medical centers.

Two unique approaches were used to provide information on physician's diagnostic test and drug ordering patterns for the most common diseases treated in VA medical centers - a prospective Delphi study and a retrospective chart review study.

Prospective Delphi Study

The first study, conducted between 1984-88 was a randomized Delphi study, Diagnostic Patterns of Care (DPC), designed to emulate an experienced physician's diagnostic impression of a particular disease or condition. We obtained a reliable consensus of opinion of a large group of experienced diagnosticians by a series of case histories, interspersed with controlled opinion feedback. The needs of physicians in their own practice setting was captured while preserving freedom of choice and creativity.

The Delphi technique allowed 804 experienced physicians in multiple specialties practicing in 42 VA medical centers to design their own Diagnostic Patterns of Care for use in satisfying JCAHO test appropriateness standards and other quality assurance and educational objectives.

We found agreement between what the experts in a given medical specialty say, and what other doctors order. Not unexpectedly, we also found that there is more intense test ordering for an unstable (critical) patient than for a stable (non-critical) patient. Additionally, our physician cohort, practicing in small to large, teaching and non-teaching hospitals tended to order fewer tests if they had twenty years or more of clinical experience. We could not establish a reliable trend consistent with test ordering in teaching vs. non-teaching hospitals, since the majority of physicians in the study practiced in teaching hospitals. However, we found that physicians practicing in VA medical centers in the southeastern geographic region of the United States ordered a statistically significant larger volume of tests than physicians practicing in the northeast, upper midwest and southwest regions.

Retrospective AIDS Study

In the second study, a retrospective review of charts, the patterns of diagnostic tests ordered for six categories of AIDS patients, ranging from HIV+ (asymptomatic) to Death due to ARC or AIDS, were recorded in 1987 at

six VA medical centers with the highest population of AIDS patients. Patterns of care were obtained from the review of 129 charts, and represent the collective opinion of VA physicians most familiar with the care of AIDS patients. A significantly larger volume and variety of tests were ordered per patient in this study than in the Diagnostic Patterns of Care (DPC) study based on non-AIDS diseases, however the top 25 tests ordered for all six categories of AIDS patients were very similar in type to the top 25 tests ordered for patients in the eighteen non-AIDS diseases studied in the prospective DPC Delphi survey.

The results of both the prospective study on eighteen diseases, and the six stages in the retrospective AIDS study are presented in histogram format, which graphically displays physician's test and/or drug choices in ranked order.

Value and Applications of Both Studies

The data presented in this monograph may be used for quality assurance, medical education and cost management purposes. It is important to note that the format presented represents the nationwide response of VA physicians who participated in the study, and does not represent the individual, customized patterns of care that are seen in each VA medical center. Each participating VA medical center received its own survey results in March 1989 and follows its own established test appropriateness standards. It is important that the results in this monograph not be interpreted as official policy of the Department of Veterans Affairs for mandated test and drug ordering, but instead used to compare actual test/drug usage patterns with test/drug patterns chosen by experienced clinicians in each specialized area.

The most valuable aspect of this monograph is the original method presented in Sections V and VI that can be used by individual medical centers to design and optimize their own diagnostic patterns of care and calculate their costs. Economies of scale and cost effective quality care will be achieved if clinicians, laboratory, radiology and nuclear medicine physicians collaborate to design more meaningful, specific diagnostic testing patterns. It is to this end that four years of study was directed.

SECTION II

PROSPECTIVE DELPHI STUDY - Diagnostic Patterns of Care

Historical Background and Study Rationale

The need to provide information for physicians and quality assurance coordinators on the appropriate use of diagnostic tests was the original stimulus for the Diagnostic Patterns of Care Delphi project. In the absence of definitive guidelines for test ordering in 1983, Pathology and Laboratory Medicine Service in VA Central Office began the task of formulating guidelines by collaborating with the VA's Assistant Chief Medical Director for Academic Affairs and Clinical Affairs Director of Medical Service. Recognizing the importance of an educational approach for an effort as large as this, a series of four Regional Medical Education Center workshops was funded by the Office of Academic Affairs between 1984-88. Nearly 250 chiefs of medicine and laboratory medicine/pathology from 110 VA medical centers and 20 private sector hospitals attended the workshops, learned the Diagnostic Patterns of Care (DPC) method, returned to their medical centers and communicated this information to their Chief of Staff. Depending on local opinions and availability of staff, the Chief of Staff chose to participate, or not participate, in the DPC Delphi Study. By 1989, 42 VAMCs and 804 physicians responded to the study, selected eighteen diseases, and designed their diagnostic test choices for each disease, based on phase of hospital stay and severity.

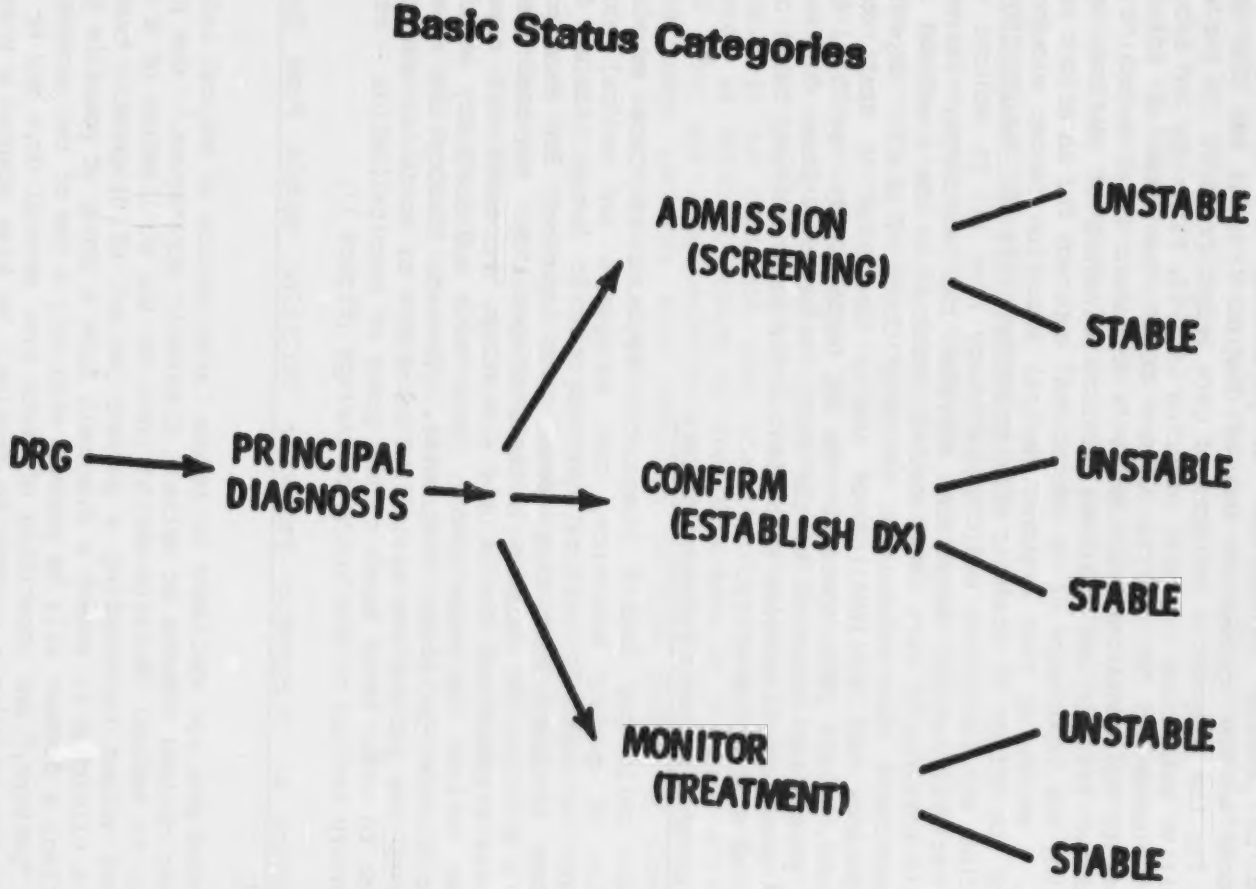
Philosophy of Diagnostic Patterns of Care

The basic philosophy behind Diagnostic Patterns of Care embodied the principles of quality assurance, cost management and medical education. Physicians in medical, surgical and psychiatric subspecialties designed basic test groupings that they deemed most important for each principal diagnosis within a DRG category in their subspecialty. The basic analytical format was standardized to include a history, and asked each experienced physician to list the tests needed, their value and frequency needed for a specific disease (principal diagnosis). In each history the severity of illness of the patient was classified as stable or unstable, and asked the physician to order tests based on the phase of hospitalization - admission, confirmatory testing or monitoring of therapy (Figure 1).

Optimization of Diagnostic Protocols Utilizing Models From Operations Research

Many techniques are available to reduce large amounts of medical information to either optimal subsets or optimal diagnostic strategies.[1] One practical approach to medical decision-making involves the utilization of a group of optimized values representing a pattern or set of diagnostic tests which allows a clinician to select a diagnosis from a group of possible diseases. More often, a disease will be present with only a few of the necessary parts of the "pattern," and repetition of tests over several days may be required to allow the pathologic process to develop. We have adapted a visual image to illustrate the concept known as the "shortest route method," and its subset "critical path," for several stages of a patient's hospitalization.

Figure 1


Basic Status Categories
DRG
PRINCIPAL DIAGNOSIS
ADMISSION (SCREENING)
UNSTABLE
STABLE
CONFIRM (ESTABLISH DX)
UNSTABLE
STABLE
MONITOR (TREATMENT)
UNSTABLE
STABLE

The shortest route method is a management engineering tool in operations research, which consists of finding the shortest route from an origin to a destination through a connecting network.[2] This route can be condensed into a "critical path," an example of which is presented in Figure 2 for myocardial infarction. An algorithm is established with this network that plots a variety of tests that might be ordered for a patient admitted for evaluation and treatment of myocardial infarction. The numbered nodes indicate all of the possible tests that might be ordered by an inexperienced physician but if we consider cost containment and diagnostic efficiency as our primary goals, only those tests which are the most specific for myocardial infarction should be ordered. The shortest optimal route through the network is plotted from node to node (test-to-test) that will give the most specific information. For example, nodes 1, 3, 5, 8 and 10 (Figure 2) might be chosen by less experienced physicians, while senior, experienced physicians might only need nodes 3 and 8, CPK-MB and LDH isoenzymes (LDH 1, 2) to confirm their clinical impression.

Severity of Disease and its Relationship to Diagnostic Patterns of Care Status Categories

Diagnostic patterns of results cannot be uniformly applied to the solution of a problem without considering the acuteness and severity of illness, which vary from patient to patient.

Furthermore, a patient's hospital stay can be divided into three distinct phases viz., for purposes of diagnostic testing:

Admission Screening Tests (Admission)
Tests for Confirmation of Disease (Confirm)
Tests for Monitoring of Disease/Treatment (Monitor)

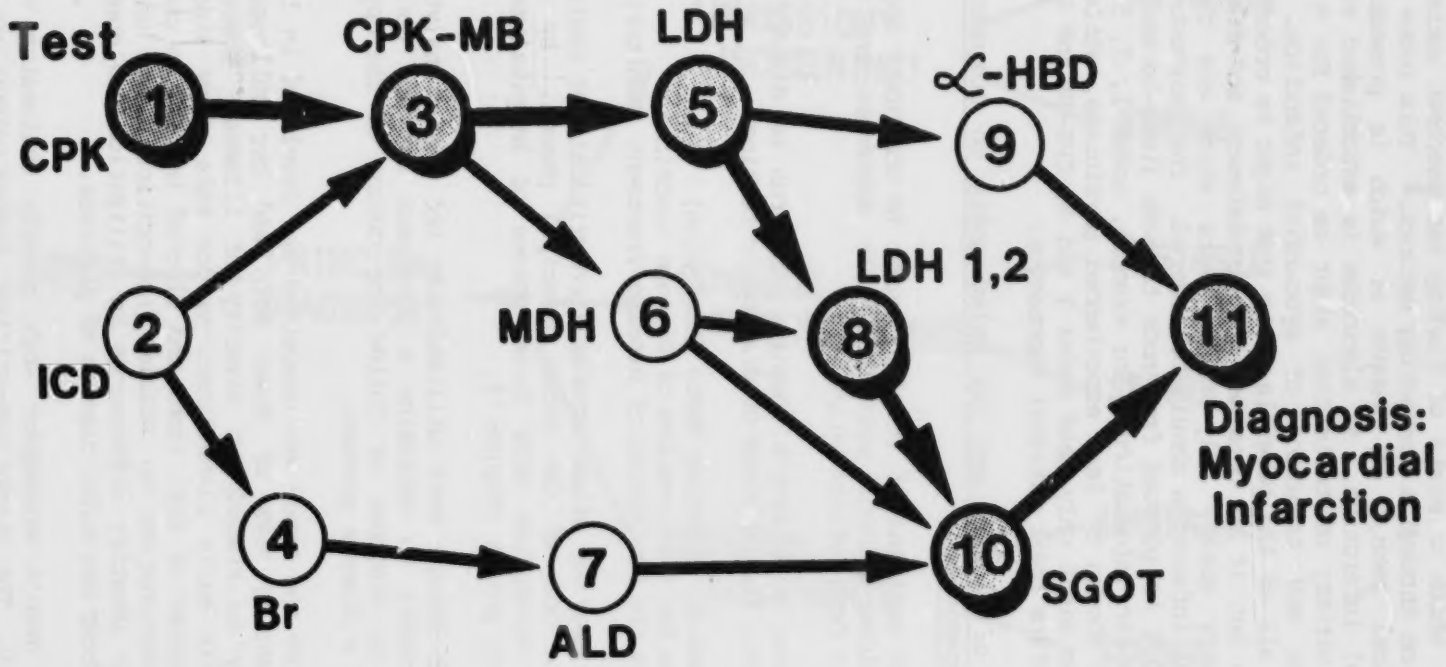
A patient may be either stable (non-critical) or unstable (critically ill) in any or all of the three principal phases. By combining stable and unstable categories with three phases of hospitalization we created six basic study groups (Figure 1).

These six groups were utilized for the basic analytical format in each medical center to determine a consensus for an "optimum" group of tests required to diagnose or follow the course of therapy for each phase and status of a disease process.

At the time the study was conceived and developed in 1983, we were aware of the pioneering work of Susan Horn and her colleagues at Johns Hopkins University on staging of severity of illness. However, we chose not to adopt their early classifications for this study since the model had not been completed at that time, and elected instead to confine our severity of illness designation to stable (non-critical) and unstable (critical) to eventually identify differences in utilization and consumption of resources between these two major classes of patients.

In fact, Horn's subsequent work clearly delineates our status categories (Figure 3). The stable non-critical status categories in our case histories for each disease simulate Horn's levels 1 and 2, while our unstable, critical category simulates levels 3 and 4.[3,4]

Figure 2


Tests Needed to Diagnose M.I.
Test
CPK
1
CPK-MB
3
LDH
5
α-HBD
9
2
ICD
MDH
6
LDH 1,2
8
11
Diagnosis:
Myocardial
Infarction
4
Br
7
ALD
10
SGOT

PATIENT SEVERITY INDEX

Time Start = _____ Time Stop = _____ Transferred in: Y N

Principal Diagnosis and Comments: _____

SPECIAL CASES

__(A) Discharged AMA
__(B) Diagnostic Admission
__(C) Uncomplicated Newborn
__(D) Hospice Admission
__(F) Transferred Out
__(G) Chemo. or Rad. Therapy Only
__(H) Pain Treatment Center
__(I) Cancelled Surgery/Admission
__(J) Cardiac Catheter Only
__(K) Admin. Days/Awaiting Placement
__(L) Transferred to Psych. Services
__(M) Transferred to Rehab. Services
__(N) Multiple Treatments and Surgeries
__(P) Protocol Treatment
__(Q) Transfer in/Out for Surgery
__(U) Premature Discharge

OFFICE USE ONLY	CHARACTERISTIC		LEVELS 1	2	3	4
	Stage of Principal Diagnosis		Asymptomatic	Moderate Manifestations	Major Manifestations	Catastrophic Manifestations
	Complications		None or Very Minor	Moderate—less important than principal diagnosis	Major—as or more important than principal Dx	Catastrophic—death or major permanent disability
	Interactions		None or Minor	Moderate	Major	Catastrophic
	Dependency		Low	Moderate	Major	Extreme
	Procedures (Non-O.R.)		Noninvasive Diagnostic or Minor Therapeutic	Therapeutic or Invasive Diagnostic	Nonemergency Life Support	Emergency Life Support
	Response to Therapy	Rate	Prompt	Moderate Delay	Serious Delay	No Response
		Resol. of Acute-Sym	Complete	Extensive but Incomplete	Incomplete and Disabling	No Resolution

NOTES

SEVERITY RATING 1 2 3 4

DO NOT USE WITHOUT CURRENT EXPLANATORY MATERIAL

Study Design

The 42 VA medical centers that volunteered to participate in the prospective Delphi study represented a randomly distributed geographic sample of both strongly academically affiliated and non-affiliated centers.

The Chiefs of Medicine and Pathology/Laboratory Medicine from each VA medical center attended a workshop in which instructors presented the theory, demonstrated the method and allowed interaction in group sessions. A disease was chosen for study in each workshop and each internist-pathologist work group chose diagnostic tests that were most appropriate for the disease, its severity and stage of hospitalization. Instructions for implementing the Delphi method in the participant's own medical centers were given, and the participants were asked to present the request for study of selected diseases by Delphi method to their Chief of Staff.

Subsequently, the Chief of Staff at the participant's VAMC was asked to poll the senior clinical staff to select a small group of diseases for the Delphi study that represented the major burden of care for that hospital. Case histories for the disease(s), previously designed in VA Central Office by a collaborative effort of senior VA internists, surgeons and pathologists, were incorporated into the DPC study design format (Figure 4). Each disease case study history requested by a VA medical center was stratified into severity stages (stable/unstable), and designed to reflect the admission, confirmation or monitoring phase of the patient's hospitalization. The completed formats for requested diseases were sent to participating VAMCs, where the Chief of Staff was instructed to give the case study formats only to senior, experienced physicians who treated the disease noted on the DPC format. Each senior, experienced physician independently and anonymously completed the format and returned it to the Chief of Staff. The completed forms were returned to the Central Office for the Department of Veterans Affairs in Washington, D.C. where they were entered into a computer database, collated and analyzed.

RESULTS

Distribution of Diseases, Hospitals and Physicians

The process of random selection of tests for general medical and surgical diseases by each medical center focused on diseases that accounted for the majority of clinical problems treated and the largest number of DRG weighted work units earned by each medical center. Table 1 illustrates the distribution of diseases selected by all medical centers in the study, the number of medical centers participating per disease category, the number of physicians answering the survey for each disease, and the distribution of physicians based on the medical center's affiliated or non-affiliated status with medical schools. Forty-two medical centers participated and 804 physicians answered disease survey formats. The majority of physicians practiced in medical centers affiliated with medical schools. Graphs representing the results obtained for each disease appear in Section III, pages 37 to 176.

Figure 4

LABORATORY DISEASE RELATED GROUPS (LDRG)—SURVEY

113.5014

(1) VAMC STATION NUMBER: 554 (2) MEDICAL SCHOOL AFFILIATION University of Colorado

(3) SPECIALTY _____ (4) YEARS IN SPECIALTY _____

(5) DRG (89) SIMPLE PNEUMONIA & PLEURISY AGE ≥ 70 &/OR CC

(6) PRINCIPAL DIAGNOSIS: 4800-4809; 483, 4870

(7) PATIENT STATUS: CONFIRM UNSTABLE

(7A) Dx: PNEUMONIA, INFLUENZA-A

CASE STUDY #89-4: It is January, and the State Health Department has detected the presence of influenza A in your community. A 70-year-old patient is admitted to the hospital with pneumonia. Yesterday, on admission, your screening tests included a WBC 6000, with differential showing marked lymphocytosis. Your physical exam revealed reduced breath sounds bilaterally. What tests will you order to confirm your clinical impression of influenzal pneumonia? What drugs will you order to treat this problem?

DIRECTIONS: Fill in the sections below (8-10-11-12) based on the diagnosis in (7A) above.

LEGEND OF CODES

Code	VALUE OF TEST
1.	Highly necessary
2.	Moderately necessary
3.	Somewhat necessary
4.	Not necessary

Code	FREQUENCY OF TESTS
1.	Once daily for one day only
2.	Once daily for 2-3 days
3.	Once daily for 3-5 days
4.	Once daily for >5 days
5.	Other (enter own freq/days)
6.	P.R.N. only
7.	Once only on admission

(8) DIAGNOSTIC TEST(S) NEEDED (Do NOT use profile or instrument names for lab tests)	(9) PURPOSE OF TEST	(10) VALUE OF TEST CODE	(11) FREQUENCY CODE	(12) PHYSICIAN'S DRUG THERAPY Your Drug(s) of Choice Write in your Drug(s) of Choice
1. Throat Washings for Influenza Virus Culture	CONFIRM UNSTABLE	1	7	1. Amantidine
2. Gram Stain of Sputum		1	7	2. *First Gen. Cephalosporin
3. Sputum Culture		1	7	3. *Aminoglycoside
4. Serum Complement Fixation Test – For Flu		1	1	4. *Erythromycin
5. Serum for Hemagglutination Test – For Flu		1	1	5.
6. Sputum for Legionella – DFB		1	7	6.
7. Electrolytes, BUN, Creatinine		1	1 + 6	7.
8. Glucose	(DO NOT ENTER DATA IN THIS COLUMN)	1	1 + 6	8.
9. Arterial Blood Gases		1	1 + 6	9.
10.				10.
11.				11.
12.				12.
13.				13.
14.				14.
15.				15.

Comments:

*2, 3, and 4 drugs are being used until cultures return because the patient is elderly and because his condition is unstable.

Revised 9/84 EMT/MCC

Figure 2. *Sample form to assist laboratory and clinical personnel in selecting the appropriate tests and test frequencies for each operation and disease. (Source: Department of Medicine and Surgery, Laboratory Service, Veterans Administration Central Office, Washington, DC. Used with permission.)*

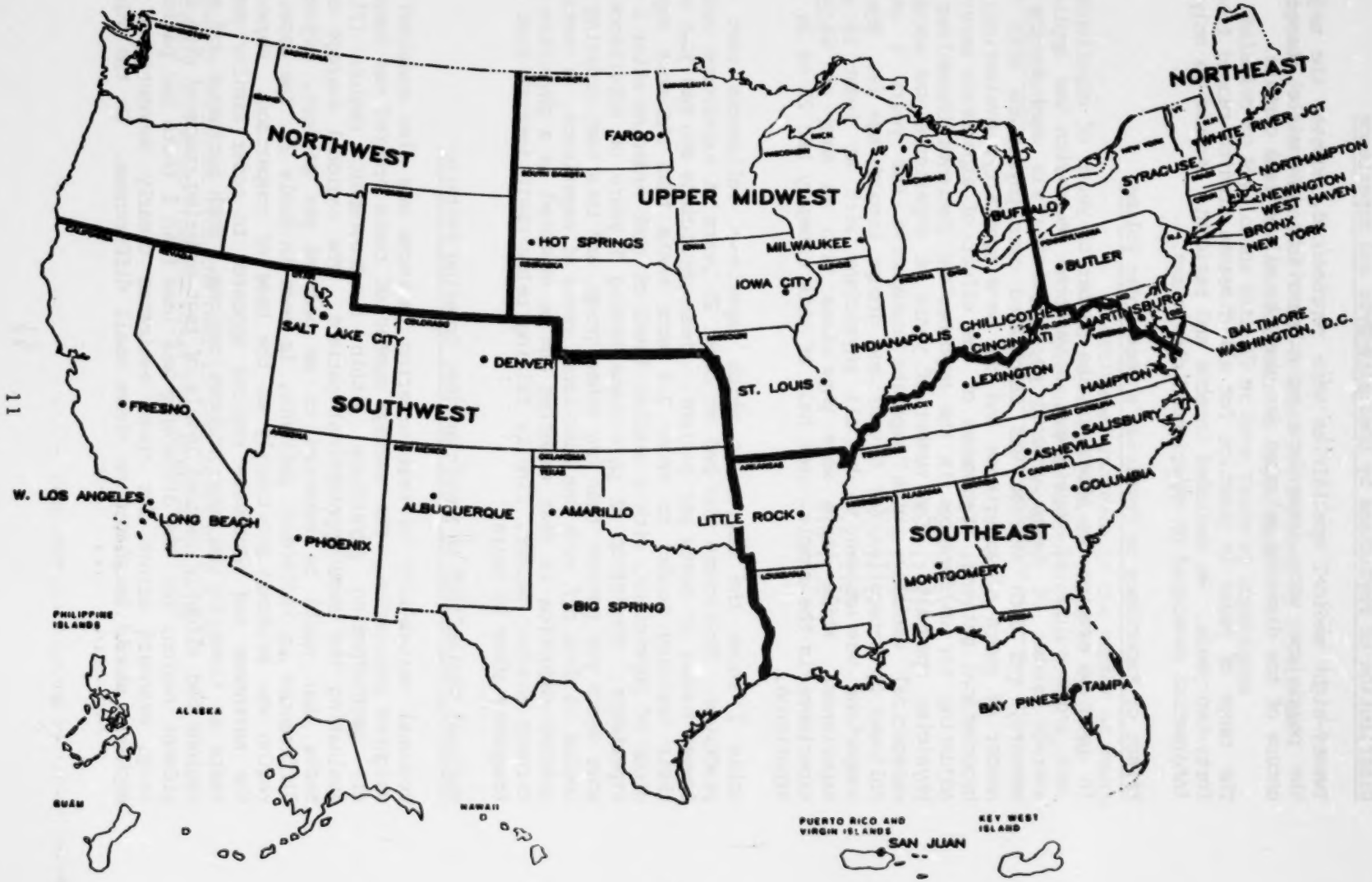
TABLE 1

DISTRIBUTION OF DISEASES, MEDICAL CENTERS, AND PHYSICIANS PARTICIPATING IN DIAGNSTIC PATTERNS OF CARE DELPHI STUDY

DISEASE	DRG NUMBER	NUMBER OF HOSPITALS STUDYING EACH DISEASE	TOTAL NUMBER OF PHYSICIANS	PHYSICIANS IN TEACHING HOSPITALS	PHYSICIANS IN NON-TEACHING HOSPITALS
Viral Pneumonia Influenza A	89	22	48	37	11
Respiratory Neoplasms Carcinoma Lung Carcinoma Lung Primary	82	24	128	99	29
Mesothelioma	82	24	67	49	18
Chronic Obstructive Pulmonary Disease	88	31	100	51	31
Heart Failure + Shock	127	19	62	41	18
Cerebellar Hemorrhage	14	10	28	19	9
Cirrhosis + Alcoholic Hepatitis	202	8	24	14	10
Angina Pectoris	140	17	42	25	17
Alcohol Dependence	436	15	56	7	8
Esophagitis Gastroenteritis & Misc. Digest	183	9	26	20	6
Lymphoma or Leukemia Hodgkin's Disease	402	3	10	10	
Cardiac Arrythmia & Conduction Disorders Vertricular Tachycardia	139	5	12	8	5
Lens Procedures Senile Cataracts	39	7	17	13	4
Diabetes Mellitus Neurologic Complications	294	16	44	20	25
Diabetes Mellitus Uncomplicated	294	16	43	18	25
Hypertension	134	9	35	23	12
Acute Myocardial Infarction	122	9	21	16	5
Hepatobiliary Diagnostic Procedure for Non-Malignancy Alcoholic Liver Disease	200	4	7	6	2

**Number of physicians does not include those physicians that did not list their specialty or years in specialty

Figure 5


NORTHWEST
FARGO
UPPER MIDWEST
NORTHEAST
WHITE RIVER JCT
SYRACUSE
NORTHAMPTON
NEWINGTON
WEST HAVEN
BRONX
NEW YORK
BUFFALO
HOT SPRINGS
MILWAUKEE
BUTLER
IOWA CITY
SALT LAKE CITY
DENVER
INDIANAPOLIS
CHILLICOTHE
CINCINNATI
MARTINSBURG
BALTIMORE
WASHINGTON, D.C.
ST. LOUIS
LEXINGTON
HAMPTON
FRESNO
SOUTHWEST
SALISBURY
ASHEVILLE
COLUMBIA
W. LOS ANGELES
LONG BEACH
ALBUQUERQUE
AMARILLO
LITTLE ROCK
PHOENIX
SOUTHEAST
MONTGOMERY
BIG SPRING
PHILIPPINE ISLANDS
ALASKA
BAY PINES
TAMPA
GUAM
HAWAII
PUERTO RICO AND VIRGIN ISLANDS
SAN JUAN
KEY WEST ISLAND

Distribution of Physicians by Specialty Type and Experience

Twenty-eight medical specialties were represented, however the majority of the physicians were internists or subspecialty internists, based on the nature of the diseases selected for study by all medical centers.

The range of years in practice for all diseases studied ranged from one to forty-two years. We excluded interns and residents because we only desired information developed by experienced clinicians.

Effect of Experience on Physician's Test Order Volume

In order to examine the effect of the number of years of experience on the test order volume of physicians, a weighted regression was applied. The average number of tests ordered per physician was used as the outcome measure, and each average was calculated over physicians with the same number of years of experience and the same specialty, evaluating the same hypothetical patient. Estimates of the effect of experience were obtained adjusting for differences in the hypothetical patients themselves and for physician specialty. The number of years of experience was entered as a categorical variable, with separate categories for years 1 through 4 followed by categories for 5 year age groups through age 24. The base of comparison was chosen to be all physicians with at least 25 years of experience. While there were physicians with as many as 42 years of experience in the sample, over half of this category had 25 or 26 years of experience.

Table 2 shows the degree to which experience influences test ordering practices. Physicians who had at least 25 years of experience ordered the fewest number of tests per patient. Those physicians who had just completed their training tended to order 2.4 more tests than the most experienced group of physicians, with a similar level of test ordering after 2 years of experience. The group of physicians having 3 years of experience ordered more tests per patient than any other group, and this test ordering practice begins to drop off with one additional years of experience. A continued and gradual reduction in test ordering can be expected as a physician progress through his/her career, finally falling below their initial test ordering frequency after 20 years.

Regional Variability in Physician Test Ordering Patterns

Regional variability in test ordering patterns was also examined using a weighted regression. The average number of tests ordered was computed for all participating physicians within a geographic region (Figure 5) evaluating the same hypothetical patient. The regional average number of tests that would be expected to be ordered per patient, adjusting for differences in individual patients, is seen in Table 3. The upper midwest region was selected arbitrarily as the base of comparison. Physicians in the northeast and southwest regions appeared to order similar numbers of tests as those in the upper midwest regions. Both northeast and southwest regions had slightly reduced levels of test ordering compared with the upper midwest region, but the difference was less than 2 tests per patient. The large standard errors for these estimates clearly demonstrates that no emphasis should be placed on these small differences. On the other hand,

Table 2

Increase in the Number of Tests Ordered Per Patient by Physicians With the Stated Years of Experience Relative to Physicians With 25 or More Years of Experience

Years of Experience	Estimated Increase in the Number of Tests Ordered Per Patient Compared With The Most Experienced Physicians (Standard Error in Parentheses)
1	2.4 (1.7)
2	2.5 (1.5)
3	5.4 (1.5)*+
4	4.8 (1.4)*
5-9	4.4 (1.1)*+
10-14	3.9 (1.1)*
15-19	3.2 (1.2)*
20-24	2.0 (1.3)

*significantly different from the over 25 year level at p = .01
+significantly different from the 20-24 year level at p = .05

Table 3

Regional Variation in the Number of Tests Ordered Per Patient Relative to the Upper Midwest Region

Region	Estimated Increase in the Number of Tests Ordered Per Patient Compared With The Upper Midwest Region (Standard Error in Parentheses)
Northeast	-1.9 (7.7)
Southeast	17.5 (7.9)
Southwest	-1.1 (7.7)

the southeast region appears to have a significantly increased level of test ordering relative to the upper midwest region. The estimated increase of 17.5 tests was significant despite the large standard error. When compared against the other two regions, the southeast region was also significantly increased at the 5% level.

Discussion

The purpose for conducting a randomized Delphi study was to learn how experienced physicians establish test preferences to formulate optimized diagnostic patterns of care, and assess the effectiveness of our study design for determining test appropriateness in patient care setting.

We found that experienced clinicians tend to order a similar group of tests for both stable (non-critical) and unstable (critical) patients with the same disease. The ten to twenty most frequently ordered tests for each disease category were usually identical, although they ranked in different order, e.g., blood culture and sensitivity might rank first for an unstable patient, and third for a stable patient.

For tests ordered less frequently there was less comparability in type and number of tests ordered. A variety of tests were ordered, ranging from general chemistry tests, sophisticated and comprehensive microbiology, and a wide spectrum of medical and surgical diagnostic tests. The greater number of tests ordered for unstable patients compared to stable patients was not unexpected, because of the more intense, complicated history that appeared on the unstable patient survey format.

Another interesting finding was the difference in volume of tests ordered based on the number of years of experience of the physician cohort. We found that physicians with more than twenty years in specialty practice generally ordered fewer tests than physicians who had less than twenty years of practice experience. This may be an effect of the "non-automation generation," i.e., physicians with more than twenty years of experience who in their training era did not have ease of availability and rapid turnaround time. It also may reflect a generation of conservative thinking engendered by the use of clinical judgement, not test results.

We suggest that tests ordered less frequently on our diagnostic protocols, i.e. tests not on the "critical path," reflect the needs of physicians to be complete in their diagnostic workup. This diagnostic approach, the "shotgun" method, is a learned behavior pattern which has been widely practiced since the advent of multiphasic automated testing in the late 1960s. Oskamp[5] and Lichtenstein, et. al.[6] described this effect as "the more information we get, the more confidence in the validity of our diagnoses we feel, even when such confidence may not be justified on the basis of the information obtained.[7]

However, experience has shown that physicians will not order "miniprofiles," even if they are made part of the test ordering form, unless they are encouraged to do so by their clinical service leaders or by hospital administrative policies.[8] Instead of choosing smaller, more specific test groups, we believe that physicians prefer to order larger test profile groups since this is a learned behavior pattern that provides emotional security and proof that nothing has been overlooked.

Other reasons for the overutilization of non-critical tests include:

- o the ease with which tests can be ordered, with rapid turnaround time through ADP links.

- o many physicians think it is cheaper to order more tests. The reason for budget imbalance and failure to have sufficient funds to support the daily volume of requested tests is the routine test workload, (and not the specialized tests), which is rarely, if ever, reviewed to determine significant abnormals, or tests ordered too often or inappropriately.

- o there is no clinical control over ordering practices in many hospitals, except in hospitals where close scrutiny is placed on reimbursement by third-party payors. Additionally, there is no formal mechanism to encourage physicians to look at the outcome of the result of a series of tests. These are the "missing components[9] in medical diagnosis, i.e., there is nothing available yet in the medical literature to provide outcome analysis for a group of tests/procedures. Physicians need to ask - did the tests/procedures I ordered give the expected result? Also, there is little or no cost/benefit analysis performed to decide which tests/procedures are the most informative and least costly.

- o the inability of computer systems in hospitals/health care settings to return prior patient-specific test information and cancel test orders; McDonald, et. al. concluded that physicians having patient-specific information about the risk of having an abnormal test result ordered fewer tests and significantly reduced costs[10].

- o there is not enough interest or participation of either senior clinicians or pathologists to inform house officers about the nature of the tests that automated instruments perform. House officers think that they must order 6, 12, 18, 20, or 30 tests because ordering smaller numbers of tests is not complete care. Only recently has the need to place emphasis on the economic aspects of test ordering in early medical education become fashionable - and that is only due to administrative decisions by federal health care regulating agencies - not by logical reasoning and mutual agreement among physicians.

A significant and unexpected finding was the pronounced difference in test ordering of physicians by geographic region. The evidence that physicians practicing in VA medical centers in the southeast region of the United States ordered a statistically significant larger volume of tests than physicians practicing in VAMCs in the northeast, upper midwest and southwest was not expected. The number and size of hospitals, case mix, acuity of illness levels, the number of physicians in the study in each region, and teaching/non-teaching status of all 42 hospitals in the study were closely matched in each geographic region, and the difference cannot be attributed to these factors.

It is difficult to explain this large difference other than by ascribing it to practice pattern variation. Wennberg has observed that physicians' "practice styles" account for many of the differences observed in the care of patients with similar conditions[11,12]. However, providing physicians with information about clinical results has been shown to reduce these

variations considerably.[13] Roos, Eddy, Wennberg and other investigators have also noted that patterns of practice are more variable for those medical conditions whose outcomes are more controversial.[14-16]

It is important, then, to consider a method, such as the Diagnostic Patterns of Care method, that will capture the needs and experience of clinical physicians in their own practice setting, using the accepted standard of care in their medical community, while identifying situations in which confirmatory tests are redundant and weed out tests and procedures that are ineffective or poorly predictive.[7]

In fact, Dixon and Laszlo estimated a hospital staff's actual need for data which are used for diagnosis and treatment, at only 5% of laboratory test volume.[17] They proposed that all other tests ordered represented 20% wastage, 20-30% for quality control and standards and 45-55% for educational purposes.

More evidence for the installation of methods to optimize test ordering is the vast universe of diagnostic tests and procedures available for use by physicians. The totals for each major diagnostic subspecialty in the 1987 edition of the AMA's CPT-4 Code Book[18] includes 918 Laboratory Medicine/Anatomic Pathology tests, 166 Radiology procedures, 137 Nuclear Medicine procedures, 128 invasive or non-invasive medical surgical diagnostic procedures and 31 ultrasound procedures. Certainly, it is impossible for even an experienced clinician to know the diagnostic utility, precision and accuracy of each of these tests and procedures, let alone their false positive or true positive values, specificity or sensitivity, without a method to measure their utility and organize them into maximally useful patterns.

In addition, Simon has noted that people have difficulty processing more than six to ten discrete items of information without external aids, due to cognitive limitations.[19] Therefore, it is not possible for physicians to store and utilize today's glut of diagnostic information without assistance by an optimization technique, computers or other information management systems.

The importance of appropriate test selection to quality assurance (and cost effectiveness) is well understood[20,21] and now is a JCAHO accreditation standard. Providing a standard of medical care for a specific hospital community using Diagnostic Patterns of Care assures that there will be agreement on the optimal strategy to be used for each disease process and provides a point of departure if a patient exhibits unusual manifestations of the suspected disease. Such standards also provide a protocol for less experienced house staff physicians to follow, based on agreement between the senior experienced subspecialists.

We conclude that the use of physician-designed test appropriateness standards using the historical vignette methodology is an effective method for providing consensus in individual hospital or practice settings. One limitation of the historical vignette methodology is that it may be skewed because of the absence of the ambiguity or uncertainty that physicians normally encounter with real or simulated patients. However, the vignette methodology is frequently used in a large number of evaluation and

certification procedures, and provides a prospective framework upon which consensus, the goal of a Delphi process, can be reached by experts about which tests are most important.[22]

Regardless of the additional burden imposed by this version of medical utilization review, the challenge to reduce diagnostic costs in American hospitals is real. Government and third party payors at this moment continue to design more ways to reduce reimbursement to private and public sector hospitals and physicians.[23] Patients who stay in hospitals longer with serious co-complications and comorbidities who require more testing are sources of lost reimbursement. It is imperative then, that the money "lost" on repetitive diagnostic tests on all patients be recovered by becoming more efficient - by optimizing testing protocols and eliminating superfluous diagnostic tests. We believe that the Diagnostic Patterns of Care method will preserve the tests and procedures that produce substantial incremental benefits, and avoid restrictions in testing so severe that they erode the quality of clinical decisions and confidence in clinical judgement.

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NEW INDEX OF DISEASES

SECTION III
DIAGNOSTIC PATTERNS OF CARE GRAPHS

This section includes all of the physicians-generated results for seventeen diseases chosen by VA physicians for the Diagnostic Patterns of Care. Delphi study described in Section II.

Each disease is presented in the following format:

Page 1: DPC survey form for a stable patient
Page 2: Graph-test choices for stable patient
Page 3: Graph-test choices for an unstable patient
Page 4: DPC survey form for an unstable patient
Page 5: Case study with drug choices for a stable patient
Page 6: Case study with drug choices for an unstable patient

Pages 2 and 3 for each case are presented together to allow inspection of the differences in test choices made for stable and unstable patients. Two diseases - Diabetes Mellitus, Uncomplicated and Senile Cataracts - do not have an unstable condition in routine clinical practice, therefore no graphs appear for these disease stages. Heart Failure + Shock does not have a stable condition in routine clinical practice, therefore no graphs appear for the stable disease stages for this disease.

An index of diseases studied follows.

Pneumonia, Influenza A 23
Respiratory Neoplasms
Carcinoma of the Lung 31
Mesothelioma 39
Diabetes Mellitus, Uncomplicated 47
Diabetes Mellitus, Neurologic Complications 53
COPD 61
Hypertension 69
Ventricular Tachycardia 77
Heart Failure and Shock 85
Angina Pectoris 91
Acute Myocardial Infarction 99
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Alcohol Dependence 115
Alcoholic Liver Disease/Cirrhosis 123
Alcoholic Liver Disease 131
Cerebellar Hemmorhage 139
Hodgkins Disease 147
Senile Cataracts 155

PNEUMONIA, INFLUENZA A

STABLE

DIAGNOSTIC PATTERNS OF CARE (DPC) - SURVEY FORM

(1) VAMC STATION NUMBER: _____ (2.) MEDICAL SCHOOL AFFILIATION_____ 113.1027A

(3.) SPECIALTY _____ (4.) YEARS IN SPECIALTY _____

(5.) DRG (Ł?) SIMPLE PNEUMONIA + PLEURISY AGE >=69 AND/OR C.C.

(6.) PRINCIPAL DIAGNOSIS: 4800-4809; 483, 4870

(7.) PATIENT STATUS: STABLE

(7.A) Dx: PNEUMONIA, INFLUENZA A

CASE STUDY #89-1: It is January, and the State Health Department has detected the presence of influenza A in your community. A 70-year-old patient is seen in the Emergency Room with a temperature of 102.5F, B.P. 110/70, P 100(reg). His breathing is labored, and breath sounds are reduced bilaterally. He is weak and is unable to walk without assistance. What screening tests will you order to substantiate your clinical impression that the patient has pneumonia secondary to influenza? What therapy will you order to treat him and what tests will you order to monitor your therapy?

LEGEND OF CODES

Code VALUE OF TEST
1. Highly necessary
2. Moderately necessary
3. Somewhat necessary
4. Not necessary

Code FREQUENCY OF TESTS
1. Once daily for one day only
2. Once daily for 2-3 days
3. Once daily for 3-5 days
4. Once daily for >5 days
5. Other (enter own freq/days)
6. P.R.N. only
7. Once only on admission

DIRECTIONS: Fill in the sections below (8-10-11-12) based on the diagnosis in (7.A) above.

(8.) DIAGNOSTIC TEST(S) NEEDED (Do NOT use profile or instrument names for lab tests)	(9.) PURPOSE OF TEST	(10.) VALUE OF TEST CODE	(11.) FREQUENCY CODE	(12.) PHYSICIAN'S DRUG THERAPY Your Drug(s) of Choice Write in your drug(s) of Choice
1. _____		_____	_____	1. _____
2. _____		_____	_____	2. _____
3. _____		_____	_____	3. _____
4. _____	SCREENING	_____	_____	4. _____
5. _____	ADMISSION	_____	_____	5. _____
6. _____	ONLY	_____	_____	6. _____
7. _____		_____	_____	7. _____
8. _____	(DO	_____	_____	8. _____
9. _____	NOT	_____	_____	9. _____
10. _____	ENTER	_____	_____	10. _____
11. _____	DATA	_____	_____	11. _____
12. _____	IN THIS	_____	_____	12. _____
13. _____	COLUMN)	_____	_____	13. _____
14. _____		_____	_____	14. _____
15. _____		_____	_____	15. _____

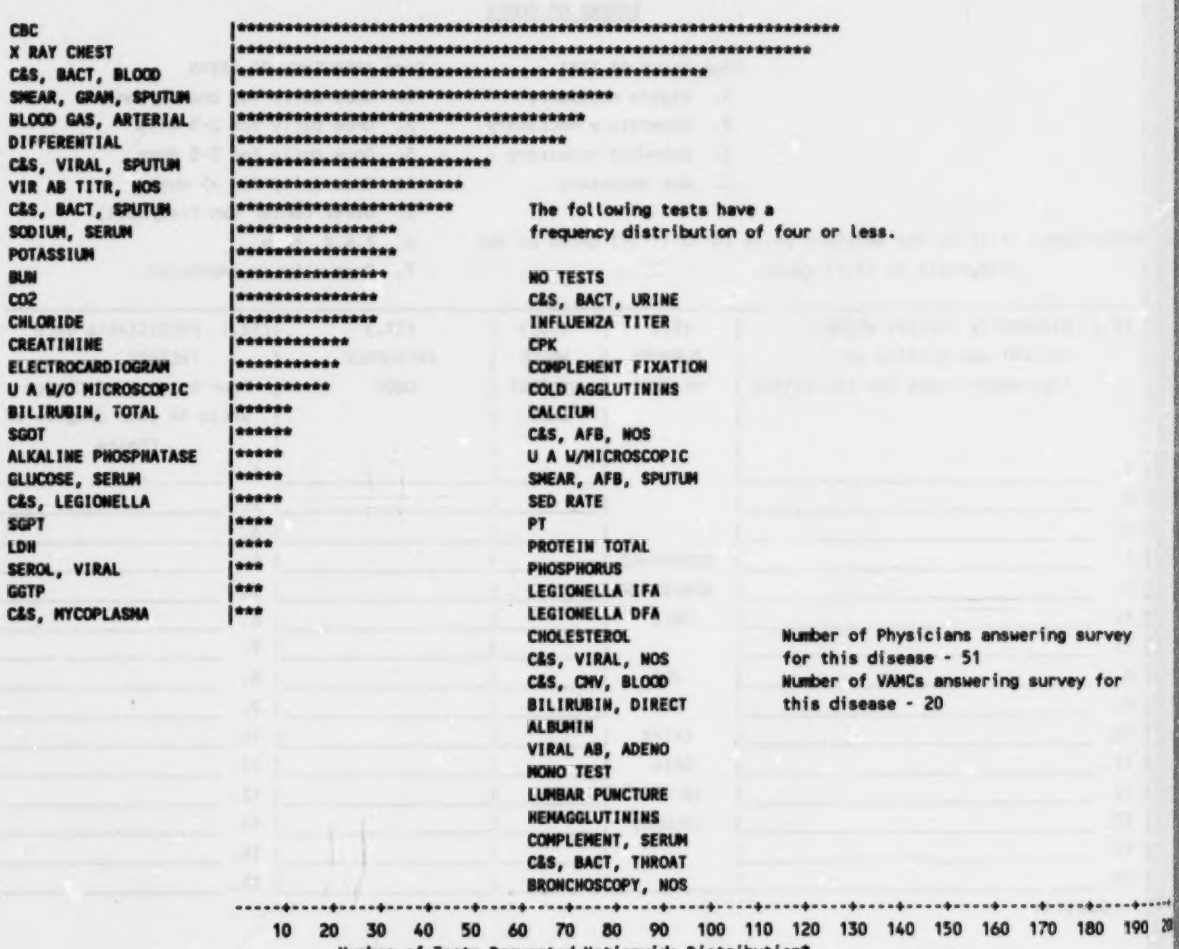
COMMENTS:

Revised 9/84 EMT/MCC

TESTS STABLE

SIMPLE PNEUMONIA + PLEURISY AGE <69 AND/OR C.C.
PRIMARY DIAGNOSIS - PNEUMONIA INFLUENZA A
NATIONWIDE HISTOGRAM
PATIENT'S CONDITION - STABLE
1986 - 1989

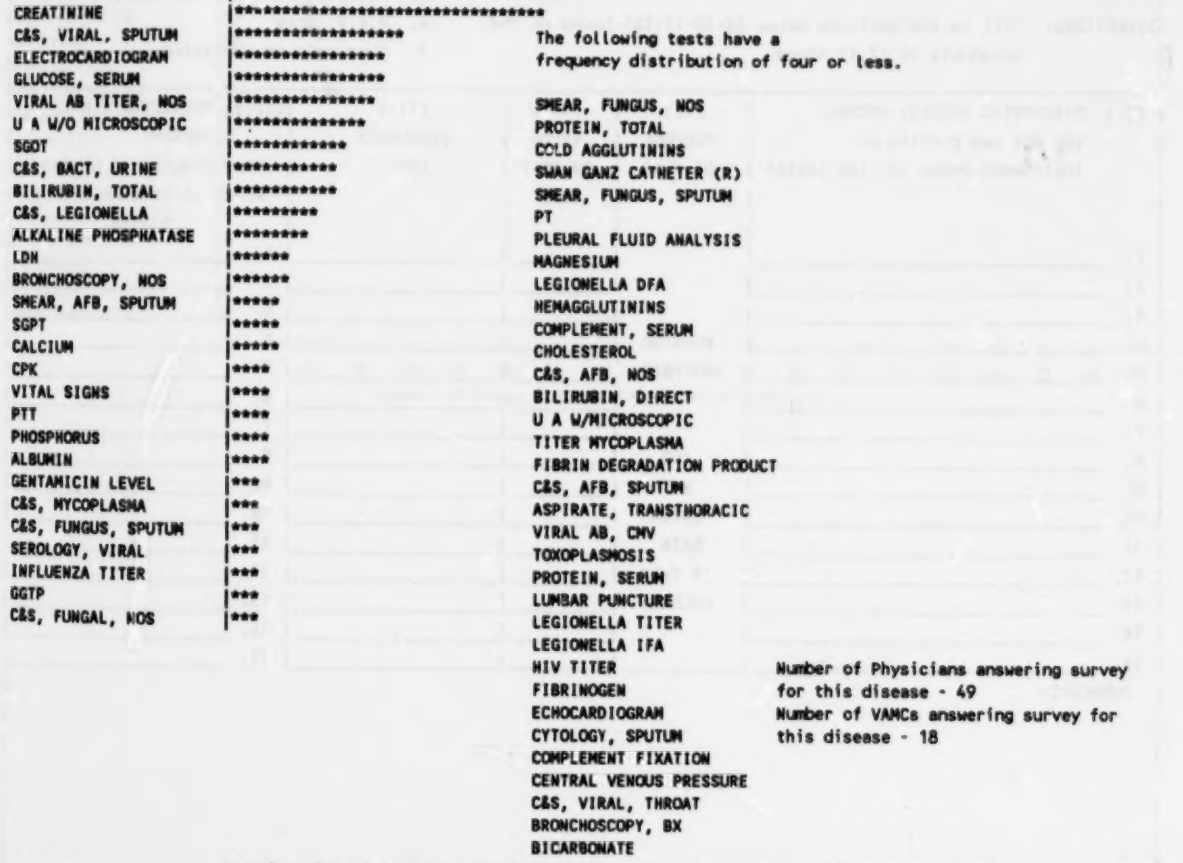
CASE STUDY: It is January, and the State Health Department has detected the presence of influenza A in your community. A 70-year-old patient is seen in the Emergency Room with a temperature of 102.5F, B.P. 110/70, P 100(reg). His breathing is labored, and breath sounds are reduced bilaterally. He is weak and is unable to walk without assistance. What screening tests will you order to substantiate your clinical impression that the patient has pneumonia secondary to influenza? What therapy will you order to treat him and what tests will you order to monitor your therapy?



*Represents the frequency of tests requested based on range of choices listed on DPC survey form (reverse side).

SIMPLE PNEUMONIA + PLEURISY AGE <69 AND/OR C.C.
PRIMARY DIAGNOSIS - PNEUMONIA INFLUENZA A
PATIENT'S CONDITION - UNSTABLE
1986 - 1989

CASE STUDY: It is January, and the State Health Department has detected the presence of influenza A in your community. A 70 year old patient is admitted to the hospital with pneumonia. You admitted him four days ago because of a temperature of 102.5 F, labored breathing and reduced breath sounds bilaterally. Chest x-ray revealed bilateral patchy infiltrates. He has not improved, and his temperature is 104 F. His blood pressure dropped to 100/50 from 150/70. What tests will you order to monitor his problems, and what drugs will you order to treat him?



*Represents the frequency of tests requested based on range of choices listed on DPC survey form (reverse side).

DIAGNOSTIC PATTERNS OF CARE (DPC) - SURVEY FORM

(1) VAMC STATION NUMBER: _____ (2.) MEDICAL SCHOOL AFFILIATION_____ 113.5013

(3.) SPECIALTY _____ (4.) YEARS IN SPECIALTY _____

(5.) DRG (89) SIMPLE PNEUMONIA + PLEURISY AGE >=69 AND/OR C.C.

(6.) PRINCIPAL DIAGNOSIS: 4800-4809; 483, 4870

(7.) PATIENT STATUS: UNSTABLE

(7.A) Dx: PNEUMONIA, INFLUENZA A

CASE STUDY #89-3: It is January, and the State Health Department has detected the presence of influenza A in your community. A 70 year old patient is admitted to the hospital with pneumonia. You admitted him four days ago because of a temperature of 102.5 F, labored breathing and reduced breath sounds bilaterally. Chest x-ray revealed bilateral patchy infiltrates. He has not improved, and his temperature is 104 F. His blood pressure dropped to 100/50 from 150/70. What tests will you order to monitor his problems, and what drugs will you order to treat him?

LEGEND OF CODES

Code	VALUE OF TEST	Code	FREQUENCY OF TESTS
1.	Highly necessary	1.	Once daily for one day only
2.	Moderately necessary	2.	Once daily for 2-3 days
3.	Somewhat necessary	3.	Once daily for 3-5 days
4.	Not necessary	4.	Once daily for >5 days
		5.	Other (enter own freq/days)
		6.	P.R.N. only
		7.	Once only on admission

DIRECTIONS: Fill in the sections below (8-10-11-12) based on the diagnosis in (7.A) above.

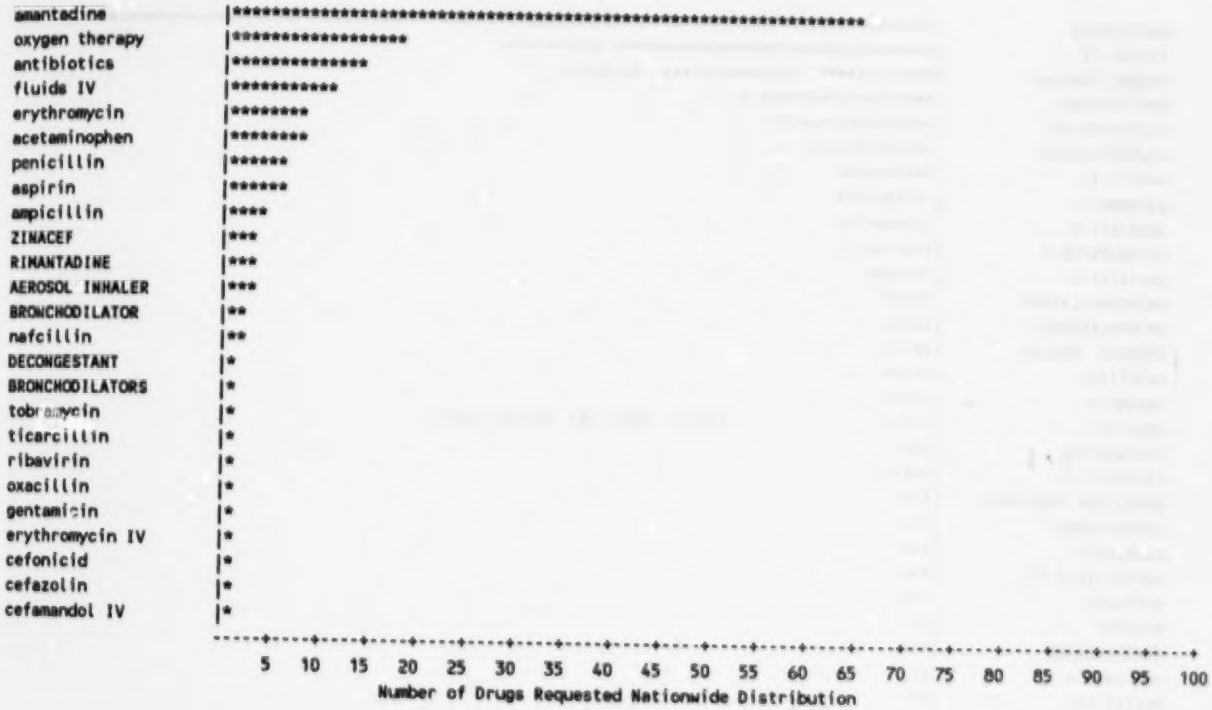
(8.) DIAGNOSTIC TEST(S) NEEDED (Do NOT use profile or instrument names for lab tests)	(9.) PURPOSE OF TEST	(10.) VALUE OF TEST CODE	(11.) FREQUENCY CODE	(12.) PHYSICIAN'S DRUG THERAPY Your Drug(s) of Choice Write in your drug(s) of Choice
1. _____		_____	_____	1. _____
2. _____		_____	_____	2. _____
3. _____		_____	_____	3. _____
4. _____	MONITOR	_____	_____	4. _____
5. _____	UNSTABLE	_____	_____	5. _____
6. _____		_____	_____	6. _____
7. _____		_____	_____	7. _____
8. _____	(DO	_____	_____	8. _____
9. _____	NOT	_____	_____	9. _____
10. _____	ENTER	_____	_____	10. _____
11. _____	DATA	_____	_____	11. _____
12. _____	IN THIS	_____	_____	12. _____
13. _____	COLUMN)	_____	_____	13. _____
14. _____		_____	_____	14. _____
15. _____		_____	_____	15. _____

COMMENTS:

Revised 9/84 EMT/MCC

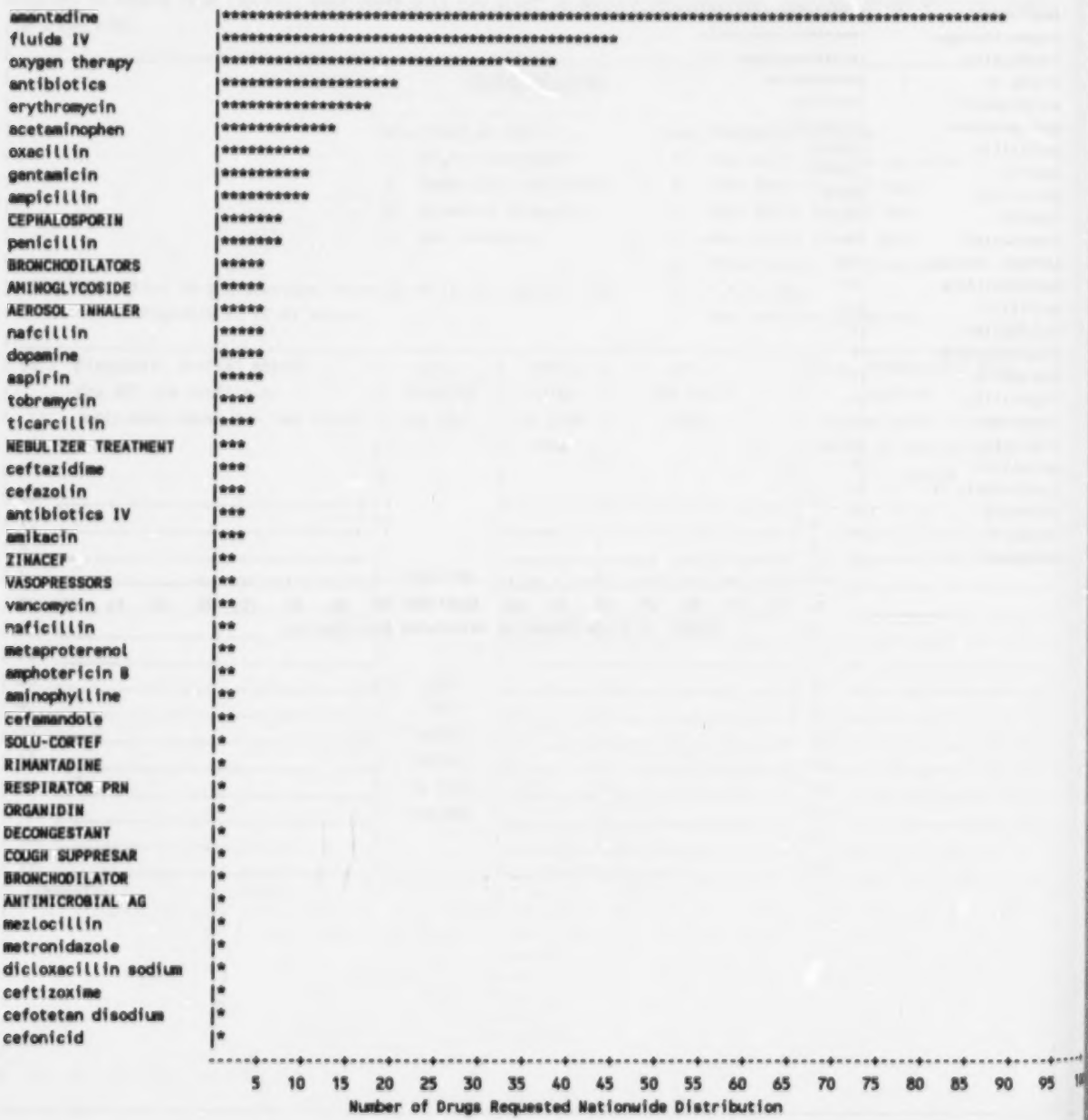
PNEUMONIA INFLUENZA A
NATIONWIDE HISTOGRAM FOR DRUGS
PATIENT'S CONDITION - STABLE

CASE STUDY: It is January, and the State Health Department has detected the presence of influenza A in your community. A 70-year-old patient is seen in the Emergency Room with a temperature of 102.5F, B.P. 110/70, P 100(reg). His breathing is labored, and breath sounds are reduced bilaterally. He is weak and is unable to walk without assistance. What screening tests will you order to substantiate your clinical impression that the patient has pneumonia secondary to influenza? What therapy will you order to treat him and what tests will you order to monitor your therapy?



PNEUMONIA INFLUENZA A
NATIONWIDE HISTOGRAM - DRUGS
PATIENT'S CONDITION - UNSTABLE

CASE STUDY: It is January, and the State Health Department has detected the presence of influenza A in your community. A 70 year old patient is admitted to the hospital with pneumonia. You admitted him four days ago because of a temperature of 102.5 F, labored breathing and reduced breath sounds bilaterally. Chest x-ray revealed bilateral patchy infiltrates. He has not improved, and his temperature is 104 F. His blood pressure dropped to 100/50 from 150/70. What tests will you order to monitor his problems, and what drugs will you order to treat him?



CARCINOMA OF THE LUNG

STABLE

DIAGNOSTIC PATTERNS OF CARE (DPC) - SURVEY FORM

(1) VAMC STATION NUMBER: _____ (2.) MEDICAL SCHOOL AFFILIATION_____ 113.1721

(3.) SPECIALTY _____ (4.) YEARS IN SPECIALTY _____

(5.) DRG (82) RESPIRATORY NEOPLASMS

(6.) PRINCIPAL DIAGNOSIS: 1622-29;1653-1970;2391

(7.) PATIENT STATUS: STABLE

(7.A) Dx: CARCINOMA OF THE LUNG

CASE STUDY #824: A 58-year-old man has been a heavy cigarette smoker (80 pack a year) and has had a long standing "morning cough." Following two days of blood streaking of his sputum last week, a chest x-ray was obtained which showed a right hilar mass. He is seen in the ER for a chief complaint of "shortness of breath." What tests and procedures will you order to confirm your clinical impression of bronchogenic carcinoma and begin this therapy? What tests will you order to monitor your therapy?

LEGEND OF CODES

Code	VALUE OF TEST	Code	FREQUENCY OF TESTS
1.	Highly necessary	1.	Once daily for one day only
2.	Moderately necessary	2.	Once daily for 2-3 days
3.	Somewhat necessary	3.	Once daily for 3-5 days
4.	Not necessary	4.	Once daily for >5 days
		5.	Other (enter own freq/days)
		6.	P.R.N. only
		7.	Once only on admission

DIRECTIONS: Fill in the sections below (8-10-11-12) based on the diagnosis in (7.A) above.

(8.) DIAGNOSTIC TEST(S) NEEDED (Do NOT use profile or instrument names for lab tests)	(9.) PURPOSE OF TEST	(10.) VALUE OF TEST CODE	(11.) FREQUENCY CODE	(12.) PHYSICIAN'S DRUG THERAPY Your Drug(s) of Choice Write in your drug(s) of Choice
1.				1.
2.				2.
3.				3.
4.	SCREENING			4.
5.	ADMISSION			5.
6.	ONLY			6.
7.				7.
8.	(DO			8.
9.	NOT			9.
10.	ENTER			10.
11.	DATA			11.
12.	IN THIS			12.
13.	COLUMN)			13.
14.				14.
15.				15.

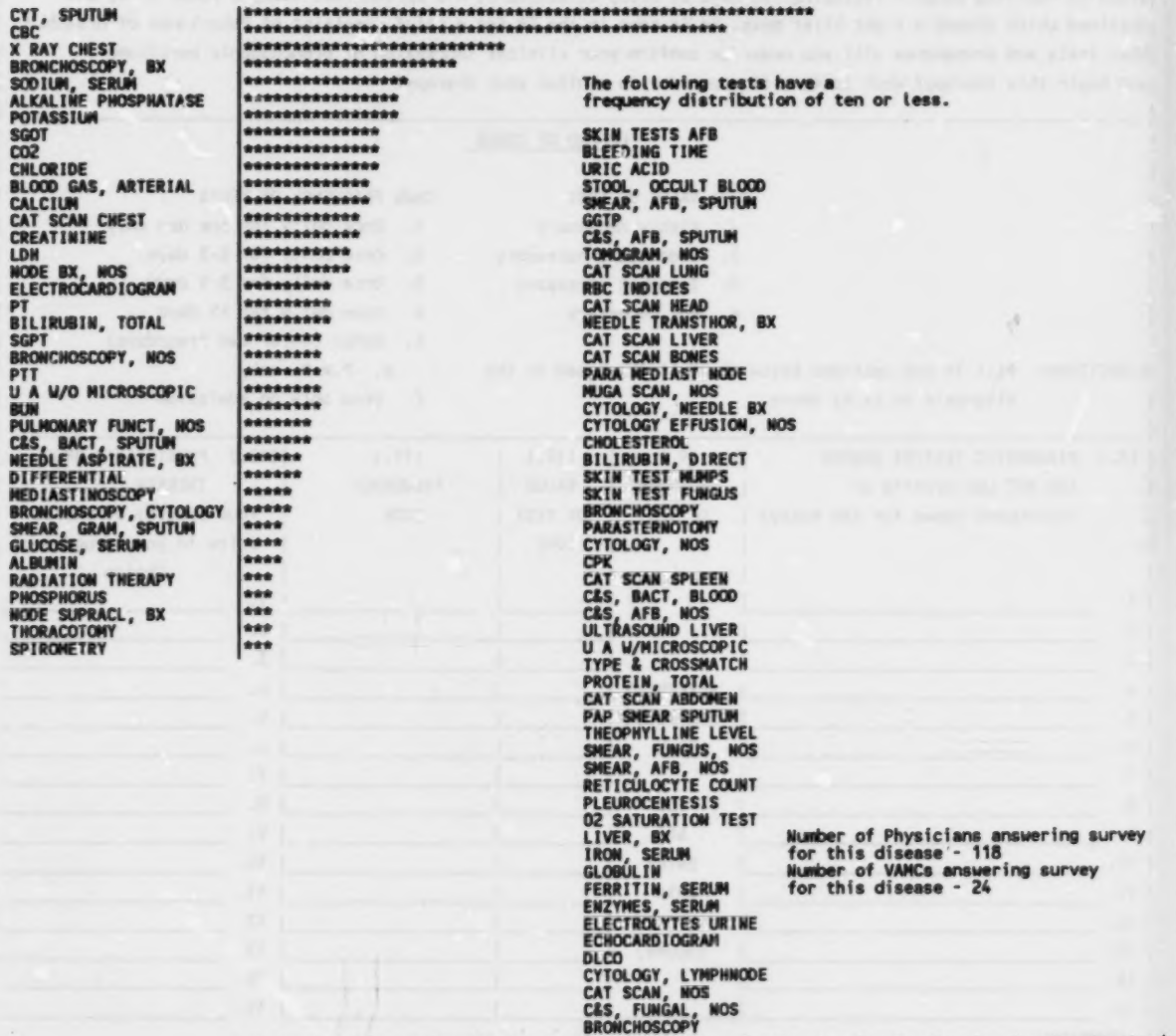
COMMENTS:

Revised 9/84 EMT/MCC

TESTS STABLE

RESPIRATORY NEOPLASMS
PRIMARY DIAGNOSIS - CARCINOMA OF THE LUNG PRIMARY
NATIONWIDE HISTOGRAM
PATIENT'S CONDITION - STABLE
1986 - 1989

CASE STUDY: A 58-year-old man has been a heavy cigarette smoker (80 packs a year) and has had a long standing "morning cough." Following two days of blood streaking of his sputum last week, a chest x-ray was obtained which showed a right hilar mass. He is seen in the ER for a chief complaint of "shortness of breath." What tests and treatment will you order to confirm your clinical impression of bronchogenic carcinoma and begin this therapy? What tests will you order to monitor your therapy?

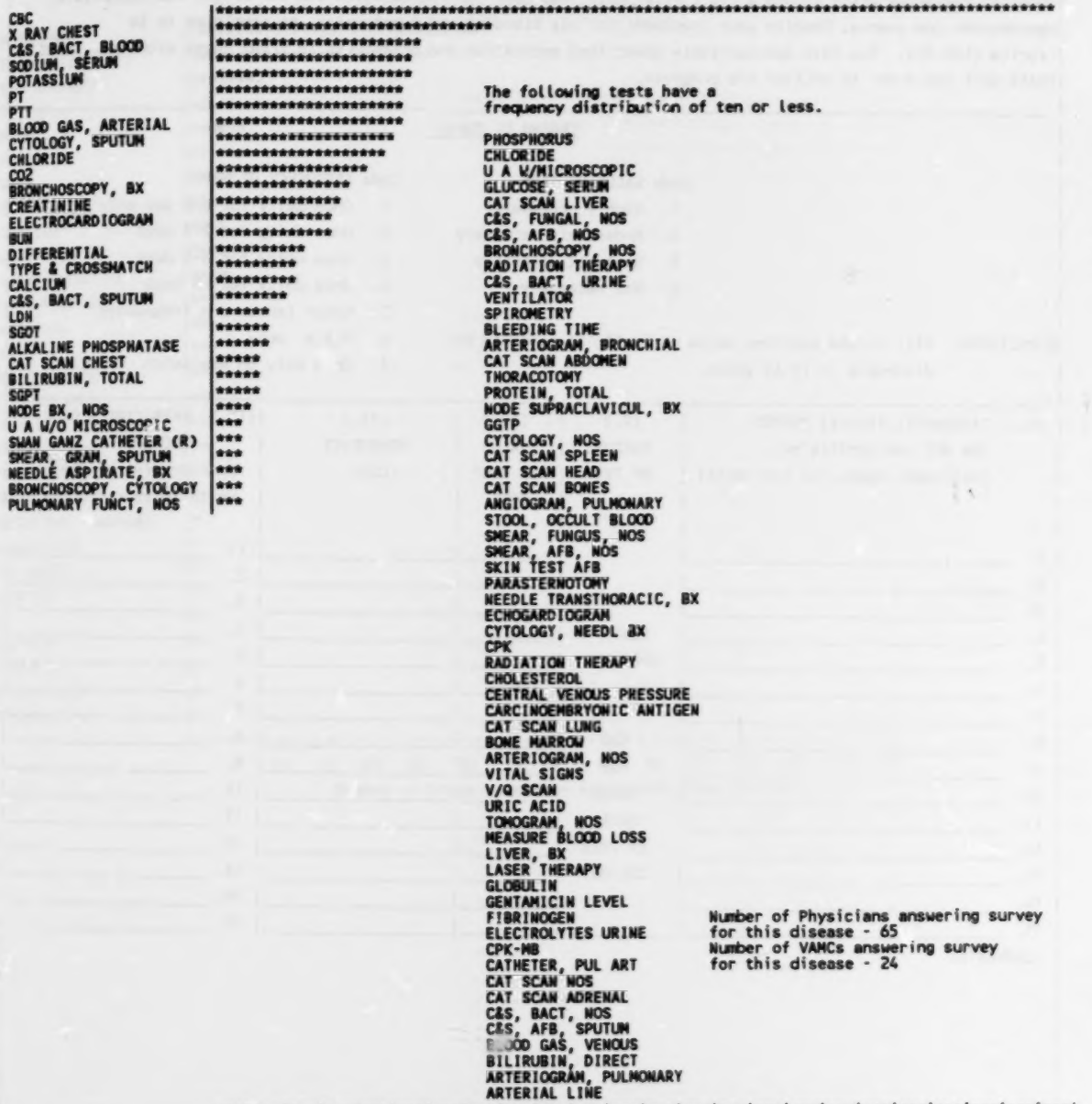


*Represents the frequency of tests requested based on range of choices listed on DPC survey form (reverse side).

TESTS UNSTABLE

RESPIRATORY NEOPLASMS
PRIMARY DIAGNOSIS - CARCINOMA OF THE LUNG PRIMARY
NATIONWIDE HISTOGRAM
PATIENT'S CONDITION - UNSTABLE
1986 - 1989

CASE STUDY: A 58-year old man has been a heavy cigarette smoker (80 packs a year) and has had a long standing "morning cough." Following two days of blood streaking of his sputum last week, a chest x-ray was obtained yesterday which showed a right hilar mass. Two days ago you admitted him for bright red hemoptysis, hypotension and anemia. You appropriately prescribed medication and treatment for these problems, but his hemoptysis has continued. What tests/procedures will you order, assuming his carcinoma is inoperable, and his vital signs remain unstable? What therapy will you prescribe, and what tests will you order to monitor his progress?



*Represents the frequency of tests requested based on range of choices listed on DPC survey form (reverse side).

UNSTABLE

DIAGNOSTIC PATTERNS OF CARE (DPC) - SURVEY FORM

(1) VAMC STATION NUMBER: _____ (2.) MEDICAL SCHOOL AFFILIATION_____ 113.6002

(3.) SPECIALTY _____ (4.) YEARS IN SPECIALTY _____

(5.) DRG (82) RESPIRATORY NEOPLASMS

(6.) PRINCIPAL DIAGNOSIS: 1622-29;1653-1970;2391

(7.) PATIENT STATUS: UNSTABLE

(7.A) Dx: CARCINOMA OF THE LUNG

CASE STUDY #82-11: A 58-year old man has been a heavy cigarette smoker (80 pack a year) and has had a long standing "morning cough." Following two days of blood streaking of his sputum last week, a chest x-ray was obtained yesterday which showed a right hilar mass. Two days ago you admitted him for bright red hemoptysis, hypotension and anemia. Despite your treatment for his bleeding and hypotension, he continues to be febrile (103.5F). You have appropriately prescribed medication and procedures to treat these problems. What tests will you order to monitor his progress.

LEGEND OF CODES

Code	VALUE OF TEST	Code	FREQUENCY OF TESTS
1.	Highly necessary	1.	Once daily for one day only
2.	Moderately necessary	2.	Once daily for 2-3 days
3.	Somewhat necessary	3.	Once daily for 3-5 days
4.	Not necessary	4.	Once daily for >5 days
		5.	Other (enter own freq/days)
		6.	P.R.N. only
		7.	Once only on admission

DIRECTIONS: Fill in the sections below (8-10-11-12) based on the diagnosis in (7.A) above.

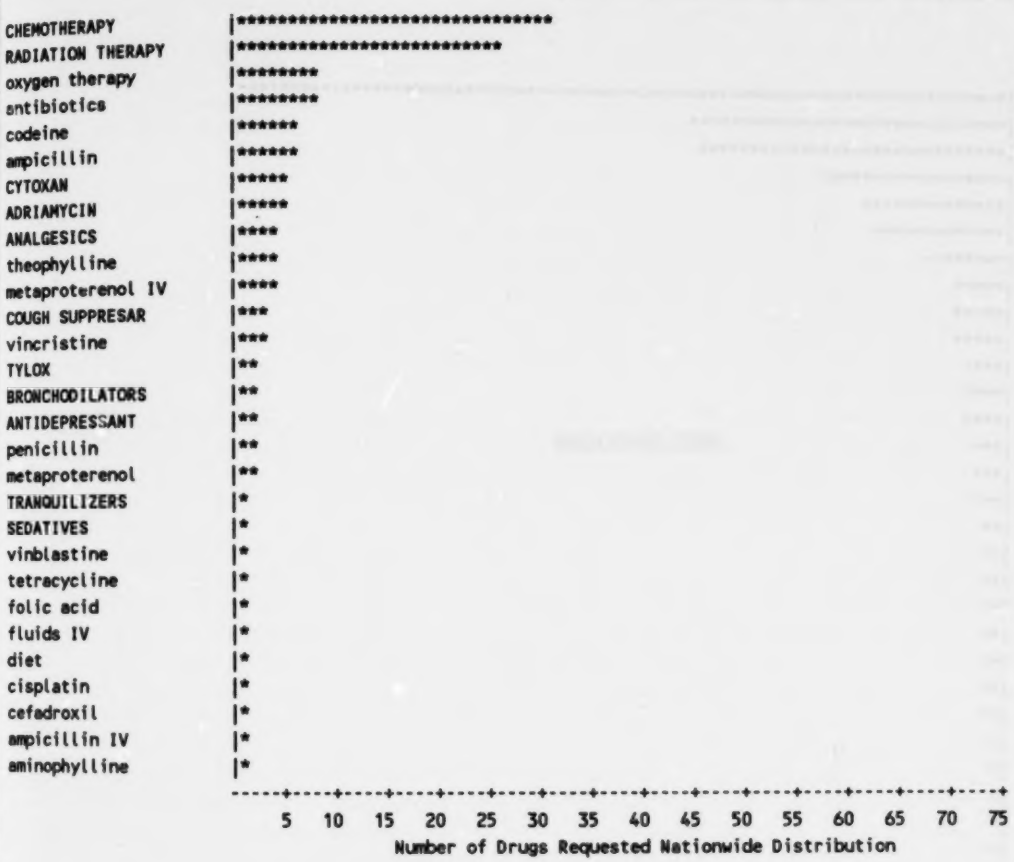
(8.) DIAGNOSTIC TEST(S) NEEDED (Do NOT use profile or instrument names for lab tests)	(9.) PURPOSE OF TEST	(10.) VALUE OF TEST CODE	(11.) FREQUENCY CODE	(12.) PHYSICIAN'S DRUG THERAPY Your Drug(s) of Choice Write in your drug(s) of Choice
1.				1.
2.				2.
3.				3.
4.	MONITOR			4.
5.	UNSTABLE			5.
6.				6.
7.				7.
8.	(DO			8.
9.	NOT			9.
10.	ENTER			10.
11.	DATA			11.
12.	IN THIS			12.
13.	COLUMN)			13.
14.				14.
15.				15.

COMMENTS:

Revised 9/84 EMT/MCC

RESPIRATORY NEOPLASMS
PRIMARY DIAGNOSIS - CARCINOMA LUNG PRIMARY
NATIONWIDE HISTOGRAM FOR DRUGS
PATIENT'S CONDITION - STABLE

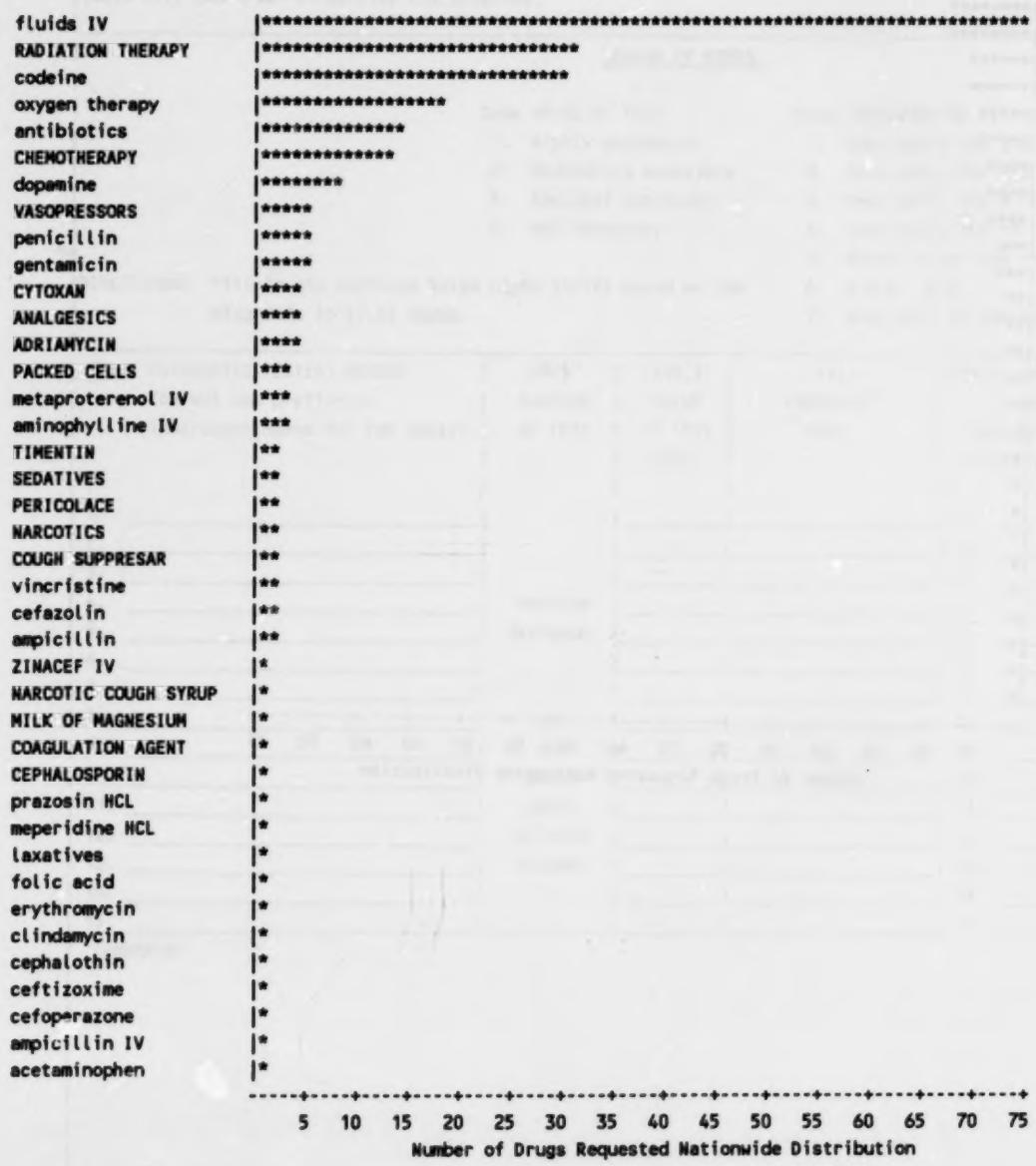
CASE STUDY: A 58-year-old man has been a heavy cigarette smoker (80 packs a year) and has had a long standing "morning cough." Following two days of blood streaking of his sputum last week, a chest x-ray was obtained which showed a right hilar mass. He is seen in the ER for a chief complaint of "shortness of breath." What tests and treatment will you order to confirm your clinical impression of bronchogenic carcinoma and begin this therapy? What tests will you order to monitor your therapy?



DRUGS UNSTABLE

RESPIRATORY NEOPLASMS
PRIMARY DIAGNOSIS - CARCINOMA LUNG PRIMARY
NATIONWIDE HISTOGRAM FOR DRUGS
PATIENT'S CONDITION - UNSTABLE

CASE STUDY: A 58-year old man has been a heavy cigarette smoker (80 packs a year) and has had a long standing "morning cough." Following two days of blood streaking of his sputum last week, a chest x-ray was obtained yesterday which showed a right hilar mass. Two days ago you admitted him for bright red hemoptysis, hypotension and anemia. You appropriately prescribed medication and treatment for these problems, but his hemoptysis has continued. What tests/procedures will you order, assuming his carcinoma is inoperable, and his vital signs remain unstable? What therapy will you prescribe, and what tests will you order to monitor his progress?



MESOTHELIOMA

STABLE

DIAGNOSTIC PATTERNS OF CARE (DPC) - SURVEY FORM

(1) VAMC STATION NUMBER: _____ (2.) MEDICAL SCHOOL AFFILIATION_____ 113.1301

(3.) SPECIALTY _____ (4.) YEARS IN SPECIALTY _____

(5.) DRG (82) RESPIRATORY NEOPLASMS

(6.) PRINCIPAL DIAGNOSIS: 1630-1631

(7.) PATIENT STATUS: STABLE

(7.A) Dx: MESOTHELIOMA

CASE STUDY #82: A 50-year-old caucasian man, who has worked as an insulator in the ship refitting industry, has had right lateral chest pain for 2 weeks. Chest examination reveals absent breath sounds and dullness to percussion in the R. What tests and procedures will you order to screen this patient and substantiate your clinical impression that this patient has a respiratory neoplasm, most likely mesothelioma? What tests will you order to evaluate your therapy?

LEGEND OF CODES

Code	VALUE OF TEST	Code	FREQUENCY OF TESTS
1.	Highly necessary	1.	Once daily for one day only
2.	Moderately necessary	2.	Once daily for 2-3 days
3.	Somewhat necessary	3.	Once daily for 3-5 days
4.	Not necessary	4.	Once daily for >5 days
		5.	Other (enter own freq/days)
		6.	P.R.N. only
		7.	Once only on admission

DIRECTIONS: Fill in the sections below (8-10-11-12) based on the diagnosis in (7.A) above.

(8.) DIAGNOSTIC TEST(S) NEEDED (Do NOT use profile or instrument names for lab tests)	(9.) PURPOSE OF TEST	(10.) VALUE OF TEST CODE	(11.) FREQUENCY CODE	(12.) PHYSICIAN'S DRUG THERAPY Your Drug(s) of Choice Write in your drug(s) of Choice
1. _____				1. _____
2. _____				2. _____
3. _____				3. _____
4. _____	ADMISSION			4. _____
5. _____	STABLE			5. _____
6. _____				6. _____
7. _____				7. _____
8. _____	(DO			8. _____
9. _____	NOT			9. _____
10. _____	ENTER			10. _____
11. _____	DATA			11. _____
12. _____	IN THIS			12. _____
13. _____	COLUMN)			13. _____
14. _____				14. _____
15. _____				15. _____

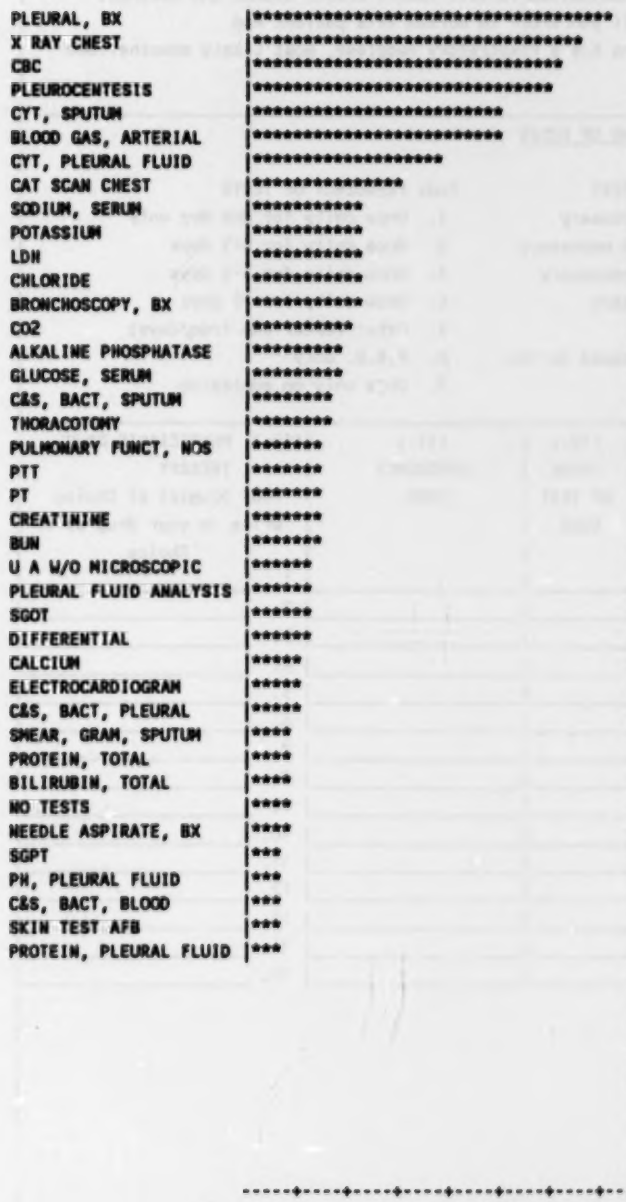
COMMENTS:

Revised 9/84 EMT/MCC

TESTS STABLE

RESPIRATORY NEOPLASMS
PRIMARY DIAGNOSIS - MESOTHELIOMA
NATIONWIDE HISTOGRAM
PATIENT'S CONDITION - STABLE
1986 - 1989

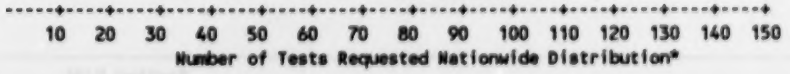
CASE STUDY: A 50-year-old caucasian man, who has worked as an insulator in the ship refitting industry, has had right lateral chest pain for 2 weeks. Chest examination reveals absent breath sounds and dullness to percussion in the R. What tests and procedures will you order to screen this patient and substantiate your clinical impression that this patient has a respiratory neoplasm, most likely mesothelioma? What tests will you order to evaluate your therapy?



The following tests have a frequency distribution of four or less

X-RAY LAB DECUB
SODIUM ABESTOS
SPECIFIC GRAVITY, PLUERAL FLUID
SED RATE
PHOSPHORUS
LUNG, BX
LDH PLEURAL FLUID
CYTOLOGY EFFUSION, NOS
CAT SCAN ABDOMEN
C&S, AFB, NOS
BRONCHOSCOPY, NOS
BLEEDING TIME
NODE BX, NOS
ANA
TYPE & CROSSMATCH
MEDIASTINOSCOPY
C&S, AFB, SPUTUM
ALBUMIN
URIC ACID
ULTRASOUND CHEST
SMEAR, GRAM, NOS
SMEAR, AFB, SPUTUM
SKIN TEST MUMPS
RHEUMATOID FACTOR
PARACENTESIS, BX
PAP SMEAR, NOS
GGTP
ELECTRON MICROSCOPIC
CYTOLOGY, NEEDLE BX
CPK
CHOLESTEROL
CELL COUNT, PLEURAL
CAT SCAN BONES
BILIRUBIN, DIRECT
SMEAR, GRAM, SPUTUM
C&S, BACT, BLOOD
SMEAR, AFB, SPUTUM
VITAL SIGNS
SKIN TEST FUNGUS
MUGA, SCAN, NOS

Number of Physicians answering survey for this disease - 58
Number of VAMCs answering survey for this disease - 24

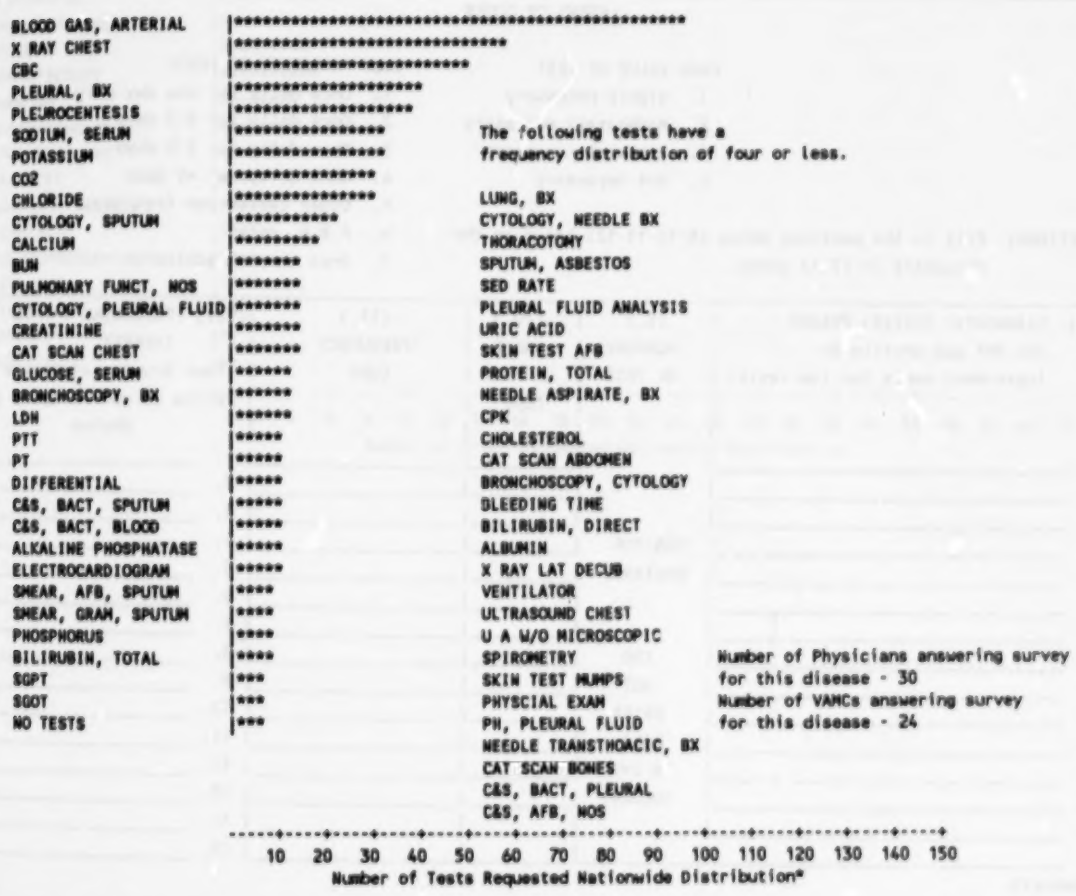


Number of Tests Requested Nationwide Distribution*

*Represents the frequency of tests requested based on range of choices listed on DPC survey form (reverse side)

RESPIRATORY NEOPLASMS
PRIMARY DIAGNOSIS - MESOTHELIOMA
NATIONWIDE HISTOGRAM
PATIENT'S CONDITION - UNSTABLE
1986 - 1989

CASE STUDY: A 50-year-old caucasian man, who has worked as an insulator in the ship refitting industry, has had right lateral chest pain for 2 weeks. Chest examination reveals absent breath sounds and dullness to percussion in the right lung. Screening tests substantiated your clinical impression of respiratory neoplasm, confirmatory tests and procedures established the diagnosis of mesothelioma. Since the patient is inoperable, but stable, what further tests, procedures and treatment will you order to monitor your therapeutic regimen until his discharge?



*Represent the frequency of tests requested based on range of choices listed on DPC survey form (reverse side).

UNSTABLE

DIAGNOSTIC PATTERNS OF CARE (DPC) - SURVEY FORM

(1) VAMC STATION NUMBER: _____ (2.) MEDICAL SCHOOL AFFILIATION_____ 113.1306

(3.) SPECIALTY _____ (4.) YEARS IN SPECIALTY _____

(5.) DRG (82) RESPIRATORY NEOPLASMS

(6.) PRINCIPAL DIAGNOSIS: 1630-1631

(7.) PATIENT STATUS: UNSTABLE

(7.A) Dx: MESOTHELIOMA

CASE STUDY #82-6A: A 50-year-old caucasian man, who has worked as an insulator in the ship refitting industry, has had right lateral chest pain for 2 weeks. Chest examination revealed absent breath sounds and dullness to percussion over the entire R chest. Screening tests substantiate your clinical impression of respiratory neoplasm, and confirmatory tests and procedures established the diagnosis of mesothelioma. He was anxious and cyanotic on admission, and his vital signs were unstable. His blood gases and vital signs still indicate that he is in respiratory distress. Your screening and confirmatory tests substantiated your clinical impression of mesothelioma. Since his tumor is inoperable, what further tests, procedures and therapy will you order until his expected demise?

LEGEND OF CODES

Code	VALUE OF TEST	Code	FREQUENCY OF TESTS
1.	Highly necessary	1.	Once daily for one day only
2.	Moderately necessary	2.	Once daily for 2-3 days
3.	Somewhat necessary	3.	Once daily for 3-5 days
4.	Not necessary	4.	Once daily for >5 days
		5.	Other (enter own freq/days)
		6.	P.R.N. only
		7.	Once only on admission

DIRECTIONS: Fill in the sections below (8-10-11-12) based on the diagnosis in (7.A) above.

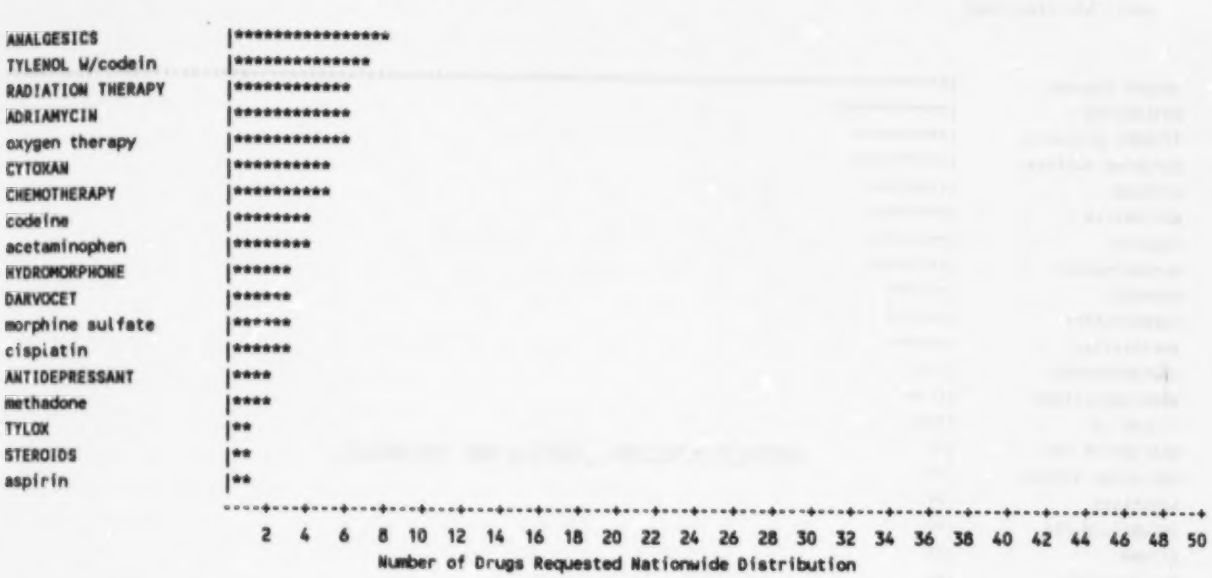
(8.) DIAGNOSTIC TEST(S) NEEDED (Do NOT use profile or instrument names for lab tests)	(9.) PURPOSE OF TEST	(10.) VALUE OF TEST CODE	(11.) FREQUENCY CODE	(12.) PHYSICIAN'S DRUG THERAPY Your Drug(s) of Choice Write in your drug(s) of Choice
1.	MONITOR UNSTABLE (DO NOT ENTER DATA IN THIS COLUMN)			1.
2.				2.
3.				3.
4.				4.
5.				5.
6.				6.
7.				7.
8.				8.
9.				9.
10.				10.
11.				11.
12.				12.
13.				13.
14.				14.
15.				15.

COMMENTS:

Revised 9/84 EMT/MCC

RESPIRATORY NEOPLASMS
PRIMARY DIAGNOSIS - MESOTHELIOMA
NATIONWIDE HISTOGRAM - DRUGS
PATIENT'S CONDITION - STABLE

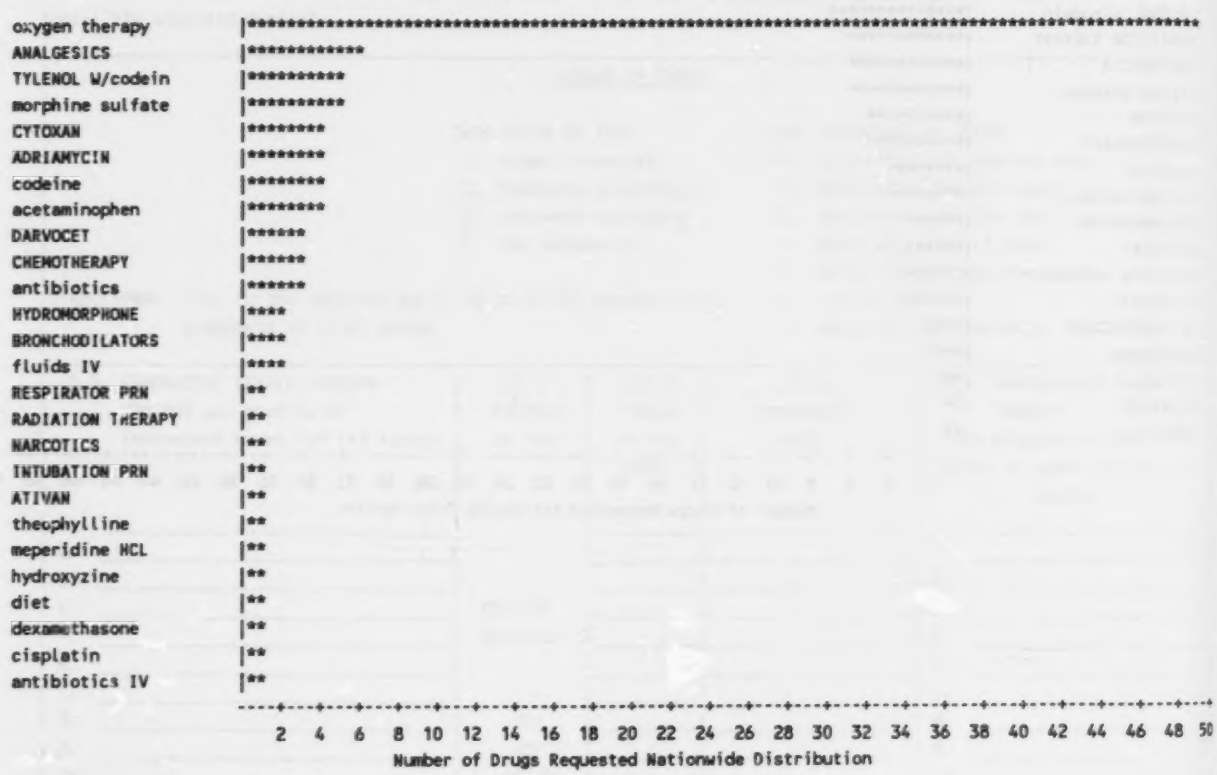
CASE STUDY: A 50-year-old caucasian man, who has worked as an insulator in the ship refitting industry, has had right lateral chest pain for 2 weeks. Chest examination reveals absent breath sounds and dullness to percussion in the right lung. What tests and procedures will you order to screen this patient and substantiate your clinical impression that this patient has a respiratory neoplasm, most likely mesothelioma? What tests will you order to evaluate your therapy?



DRUGS UNSTABLE

RESPIRATORY NEOPLASMS
PRIMARY DIAGNOSIS - MESOTHELIOMA
NATIONWIDE HISTOGRAM - DRUGS
PATIENT'S CONDITION - UNSTABLE

CASE STUDY: A 50-year-old caucasian man, who has worked as an insulator in the ship refitting industry, has had right lateral chest pain for 2 weeks. Chest examination reveals absent breath sounds and dullness to percussion in the right lung. Screening tests substantiated your clinical impression of respiratory neoplasm, confirmatory tests and procedures established the diagnosis of mesothelioma. Since the patient is inoperable, but stable, what further tests, procedures and treatment will you order to monitor your therapeutic regimen until his discharge?



DIABETES MELLITUS, UNCOMPLICATED

STABLE

DIAGNOSTIC PATTERNS OF CARE - SURVEY FORM

(1) VAMC STATION NUMBER: _____ (2.) MEDICAL SCHOOL AFFILIATION_____ 113.1078

(3.) SPECIALTY _____ (4.) YEARS IN SPECIALTY _____

(5.) DRG (294) DIABETES >=36

(6.) PRINCIPAL DIAGNOSIS: DIABETES UNCOMPLICATED ADULT

(7.) PATIENT STATUS: STABLE

(7.A) Dx: DIABETES MELLITUS, UNCOMPLICATED

CASE STUDY #294: A 52-year-old woman is referred for evaluation of 4+ glycosuria, noted during the course of a routine gyn exam. There is an equivocal history of polyuria, and no family history of diabetes mellitus. The patient is 5'5" tall and weighs 178 pounds. There are no other major finds on physical examination. You ordered screening tests that confirmed your clinical impression of Diabetes Mellitus and started appropriate therapy. What additional tests and procedures will you order to monitor her disease and course of treatment?

LEGEND OF CODES

Code	VALUE OF TEST	Code	FREQUENCY OF TESTS
1.	Highly necessary	1.	Once daily for one day only
2.	Moderately necessary	2.	Once daily for 2-3 days
3.	Somewhat necessary	3.	Once daily for 3-5 days
4.	Not necessary	4.	Once daily for >5 days
		5.	Other (enter own freq/days)
		6.	P.R.N. only
		7.	Once only on admission

DIRECTIONS: Fill in the sections below (8-10-11-12) based on the diagnosis in (7.A) above.

(8.) DIAGNOSTIC TEST(S) NEEDED (Do NOT use profile or instrument names for lab tests)	(9.) PURPOSE OF TEST	(10.) VALUE OF TEST CODE	(11.) FREQUENCY CODE	(12.) PHYSICIAN'S DRUG THERAPY Your Drug(s) of Choice Write in your drug(s) of Choice
1. _____		_____	_____	1. _____
2. _____		_____	_____	2. _____
3. _____		_____	_____	3. _____
4. _____	MONITOR	_____	_____	4. _____
5. _____	STABLE	_____	_____	5. _____
6. _____		_____	_____	6. _____
7. _____		_____	_____	7. _____
8. _____	(DO	_____	_____	8. _____
9. _____	NOT	_____	_____	9. _____
10. _____	ENTER	_____	_____	10. _____
11. _____	DATA	_____	_____	11. _____
12. _____	IN THIS	_____	_____	12. _____
13. _____	COLUMN)	_____	_____	13. _____
14. _____		_____	_____	14. _____
15. _____		_____	_____	15. _____

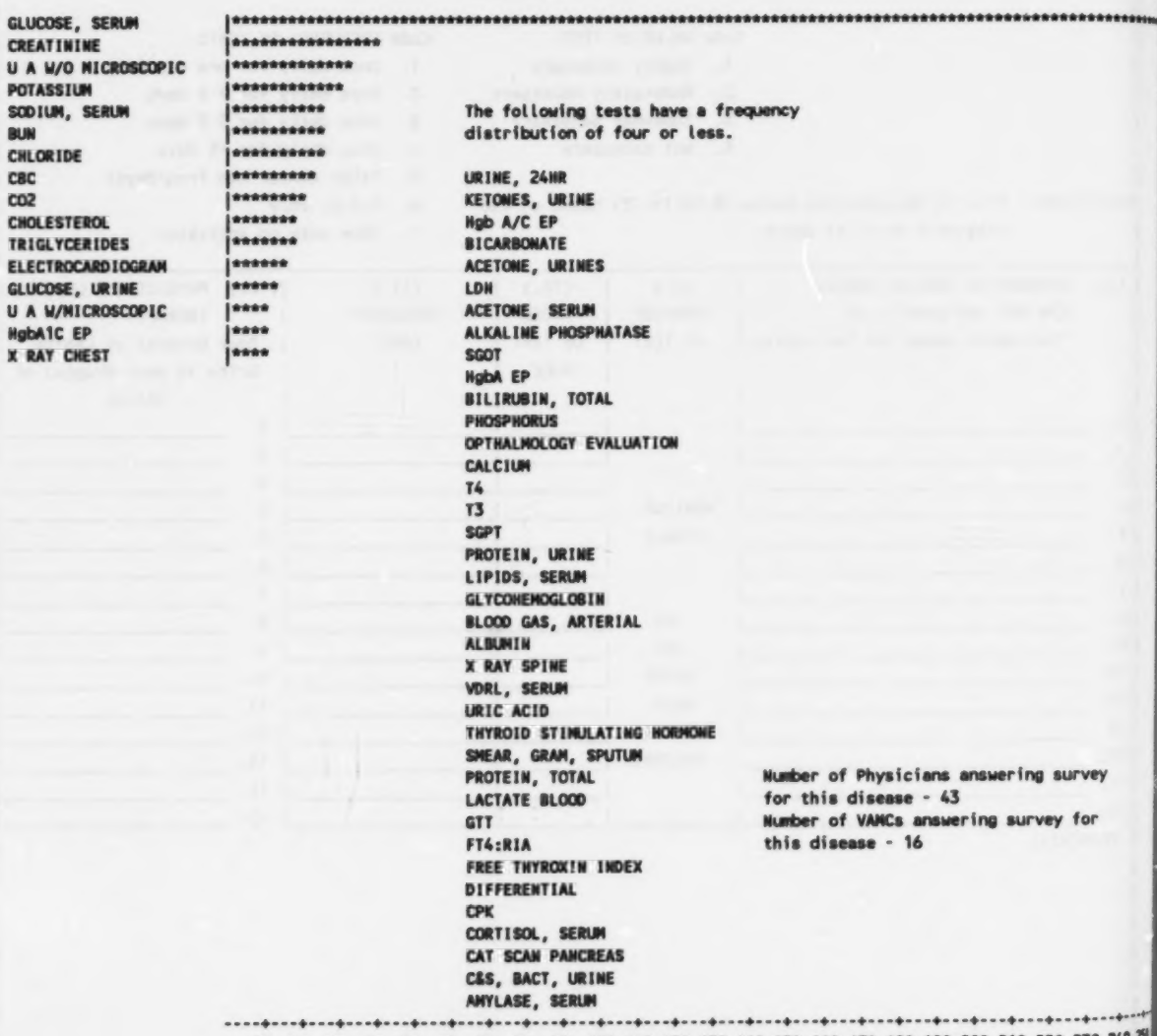
COMMENTS:

Revised 9/84 EMT/MCC

TESTS STABLE

DIABETES MELLITUS = >36
PRIMARY DIAGNOSIS - DIABETES MELLITUS, UNCOMPLICATED
NATIONWIDE HISTOGRAM
PATIENT'S CONDITION - STABLE
1986 - 1989

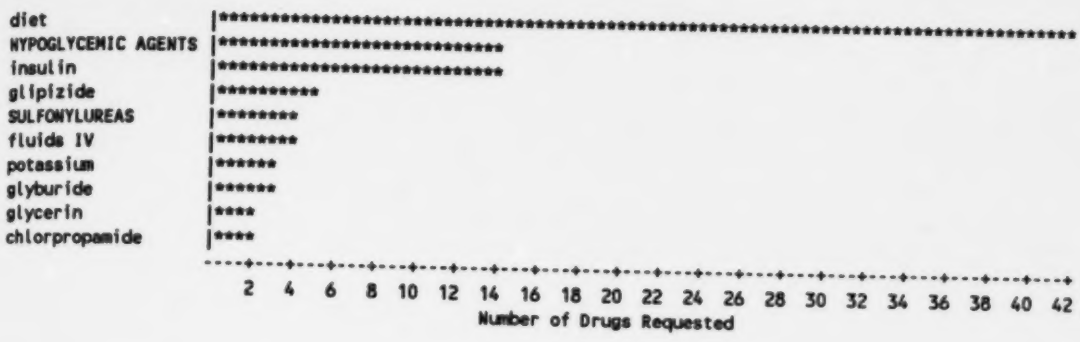
CASE STUDY: A 52-year-old woman is referred for evaluation of 4+ glycosuria, noted during the course of a routine gyn exam. There is an equivocal history of polyuria, and no family history of diabetes mellitus. The patient is 5'5" tall and weighs 178 pounds. There are no other major finds on physical examination. You ordered screening tests that confirmed your clinical impression of Diabetes Mellitus and started appropriate therapy. What additional tests and procedures will you order to monitor her disease and course of treatment?



*Represents the frequency of tests requested based on range of choices listed on DPC survey form (reverse side).

DIABETES MELLITUS, UNCOMPLICATED
NATIONWIDE HISTOGRAM - DRUGS
PATIENT'S CONDITION - STABLE

CASE STUDY: A 52-year-old woman is referred for evaluation of 4+ glycosuria, noted during the course of a routine gyn exam. There is an equivocal history of polyuria, and no family history of diabetes mellitus. The patient is 5'5" tall and weighs 178 pounds. There are no other major finds on physical examination. You ordered screening tests that confirmed your clinical impression of Diabetes Mellitus and started appropriate therapy. What additional tests and procedures will you order to monitor her disease and course of treatment?



DIABETES MELLITUS NEUROLOGIC COMPLICATIONS

DIAGNOSTIC PATTERNS OF CARE (DPC) - SURVEY FORM

(1) VAMC STATION NUMBER: _____ (2.) MEDICAL SCHOOL AFFILIATION_____ 113.1721

(3.) SPECIALTY _____ (4.) YEARS IN SPECIALTY _____

(5.) DRG (82) RESPIRATORY NEOPLASMS

(6.) PRINCIPAL DIAGNOSIS: 1622-29;1653-1970;2391

(7.) PATIENT STATUS: STABLE

(7.A) Dx: CARCINOMA OF THE LUNG

CASE STUDY #824: A 58-year-old man has been a heavy cigarette smoker (80 pack a year) and has had a long standing "morning cough." Following two days of blood streaking of his sputum last week, a chest x-ray was obtained which showed a right hilar mass. He is seen in the ER for a chief complaint of "shortness of breath." What tests and procedures will you order to confirm your clinical impression of bronchogenic carcinoma and begin this therapy? What tests will you order to monitor your therapy?

LEGEND OF CODES

Code VALUE OF TEST
1. Highly necessary
2. Moderately necessary
3. Somewhat necessary
4. Not necessary

Code FREQUENCY OF TESTS
1. Once daily for one day only
2. Once daily for 2-3 days
3. Once daily for 3-5 days
4. Once daily for >5 days
5. Other (enter own freq/days)
6. P.R.N. only
7. Once only on admission

DIRECTIONS: Fill in the sections below (8-10-11-12) based on the diagnosis in (7.A) above.

(8.) DIAGNOSTIC TEST(S) NEEDED (Do NOT use profile or instrument names for lab tests)	(9.) PURPOSE OF TEST	(10.) VALUE OF TEST CODE	(11.) FREQUENCY CODE	(12.) PHYSICIAN'S DRUG THERAPY Your Drug(s) of Choice Write in your drug(s) of Choice
1.				1.
2.				2.
3.				3.
4.	SCREENING			4.
5.	ADMISSION			5.
6.	ONLY			6.
7.				7.
8.	(DO			8.
9.	NOT			9.
10.	ENTER			10.
11.	DATA			11.
12.	IN THIS			12.
13.	COLUMN)			13.
14.				14.
15.				15.

COMMENTS:

Revised 9/84 EMT/MCC

TESTS STABLE

DIABETES AGE >36
PRIMARY DIAGNOSIS - DIABETES MELLITUS NEUROLOGIC COMPLICATIONS
NATIONWIDE HISTOGRAM
PATIENT'S CONDITION - STABLE
1986 - 1989

CASE STUDY: For 3 months a 68-year-old veteran has had weakness and pain in the right lower leg and posterior thigh. The pain began abruptly and has become increasingly severe; it is not aggravated by walking. He has a 10-year history of insulin-dependent diabetes mellitus and is currently taking 45 U of lente insulin daily. Physical exam reveals weakness of right knee flexion and in all movements of the right foot, atrophy of right ankle reflex, and hypesthesia of the right leg below the knee. Dorsalis pedis pulses are palpable bilaterally. What tests and procedures will you order to substantiate your clinical impression of diabetes mellitus with neurologic complications? What tests will you order to monitor your therapeutic regimen?

GLUCOSE, SERUM	**********	
C&S, BACT, BLOOD	**********	
CREATININE	**********	
SODIUM, SERUM	**********	
POTASSIUM	**********	The following tests have a
CHLORIDE	**********	frequency distribution of four or less.
CO2	**********	
BUN	**********	SGOT
CBC	**********	PHOSPHORUS
U A W/O MICROSCOPIC	*********	ALKALINE PHOSPHATASE
C&S, BACT, URINE	********	SGPT
X RAY CHEST	*******	ALBUMIN
ELECTROMYOGRAM	******	LDH
X RAY SPINE	******	ELECTROCARDIOGRAM
NERVE CONDUCTION STUDY	*****	CHOLESTEROL
BLOOD GAS, ARTERIAL	****	URIC ACID
DIFFERENTIAL	****	MYELOGRAM
CALCIUM	****	ECHOCARDIOGRAM
BILIRUBIN, TOTAL	***	CAT SCAN SPINE
C&S, BACT, SPUTUM	***	X RAY LEGS
		TRIGLYCERIDES
		SMEAR, GRAM, SPUTUM
		SED RATE
		RHEUMATOID FACTOR
		PTT
		PT
		PROTEIN, TOTAL
		NEUROLOGIC EXAM
		MYELOGRAM, LUMBAR
		LUMBAR PUNCTURE
		Hgb A/C EP
		GALLIUM SCAN
		FT4:RIA
		CPK
		C&S, BACT, CSF
		B12, SERUM
		BILIRUBIN, DIRECT
		ANTI NUCLEAR ANTIBODIES
		AMINOGLYCO LEVEL
		ACETONE, URINE
		X RAY HIP
		X RAY BACK
		X RAY ANKLE
		VENOGRAM
		VDRL, SERUM
		URINE 24HR
		ULTRASOUND RENAL
		ULTRASOUND ABDOMEN
		U A W/MICROSCOPIC
		T4
		T3
		TEMPERATURE
		SMEAR, GRAM, URINE
		PROTEIN, URINE
		PROTEIN, CSF
		NO TESTS
		KETONES, URINE
		GENTAMICIN LEVEL
		FOLIC ACID, RBC
		FIBRINOGEN
		FIBRIN DEGRADATION PRODUCTS
		CORTISOL, SERUM
		CELL COUNT, CSF
		CAT SCAN HEAD
		BONE SCAN
		ANTIBIOTIC LEVEL
		ACID
		ACETONE, SERUM

Number of Physicians answering survey for this disease - 44
Number of VAMCS answering survey for this disease - 16

10 20 30 40 50 60 70 80 90 100 110 120 130 140 150 160 170 180 190 200 210 220 230 240 250

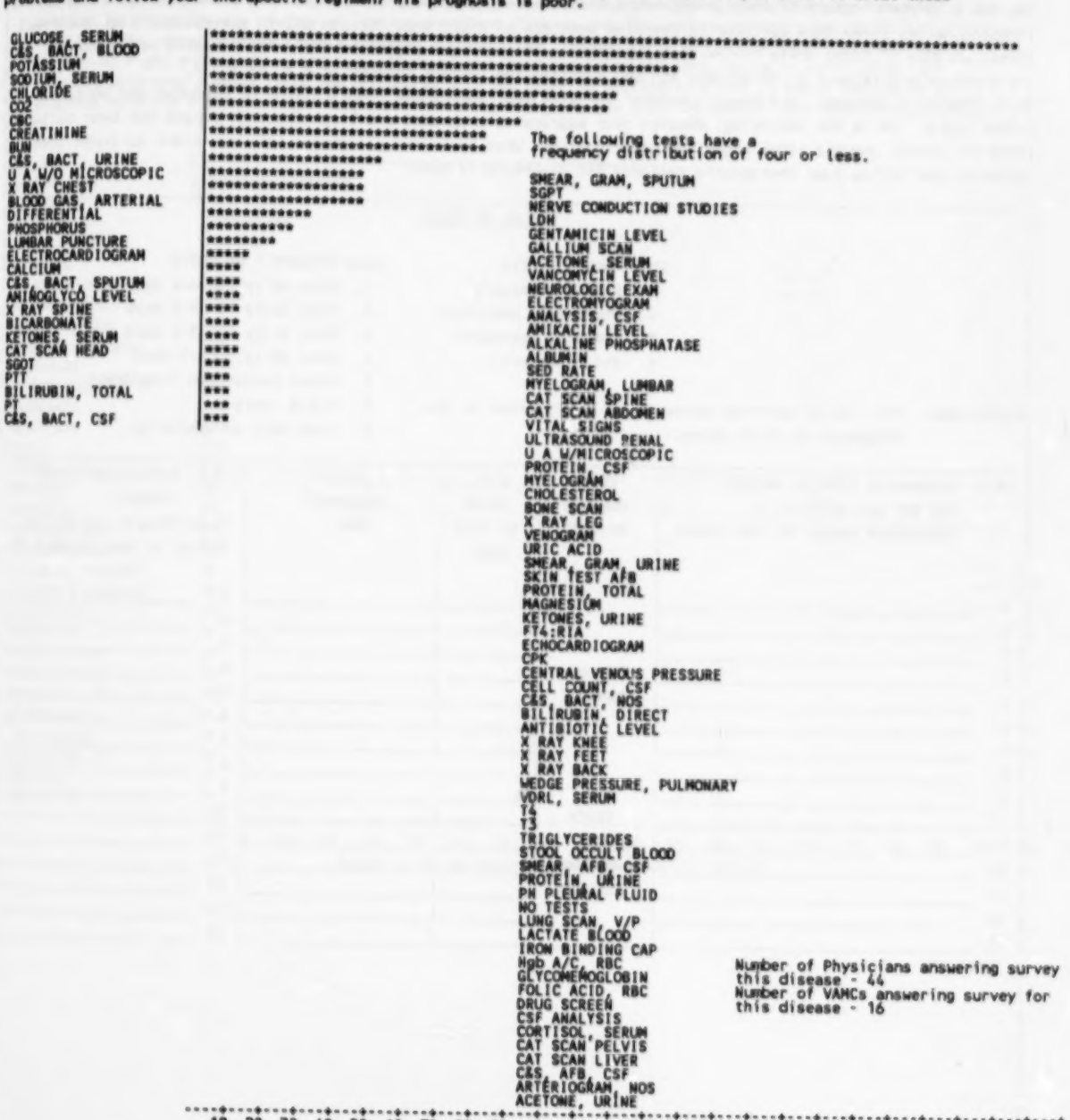
Number of Tests Requested Nationwide Distribution*

*Represents the frequency of tests requested based on range of choices listed on DPC survey form (reserve side).

TESTS UNSTABLE

DIABETES AGE >36
PRIMARY DIAGNOSIS - DIABETES MELLITUS NEUROLOGIC COMPLICATIONS
NATIONWIDE HISTOGRAM
PATIENT'S CONDITION - UNSTABLE
1986 - 1989

CASE STUDY: For 3 months a 68-year-old veteran has had weakness and pain in the right lower leg and posterior thigh. The pain began abruptly and has become increasingly severe; it was not aggravated by walking. He has a 10-year history of insulin-dependent diabetes mellitus and prior to admission, was taking 45 U of lente insulin daily. Three days ago your PE revealed weakness of right knee flexion and in all movements of the right foot, atrophy of right ankle reflex, and hypesthesia of the right leg below the knee. Dorsalis pedis pulses were palpable bilaterally. Three days ago you admitted the patient because of a T. of 102 F, B.P. 100/50, P 100(reg), and began treatment for diabetes, infectious complications of diabetes and unstable vital signs. He is not improving, despite your aggressive treatment and Staphalecoccus aureus has been cultured from his blood, and his vital signs are deteriorating. What tests and procedures will you order to treat these problems and follow your therapeutic regimen? His prognosis is poor.



*represents the frequency of tests requested based on range of choices list on DPC survey form (reverse side).

UNSTABLE

DIAGNOSTIC PATTERNS OF CARE (DPC) SURVEY FORM

(1) VAMC STATION NUMBER: _____ (2.) MEDICAL SCHOOL AFFILIATION_____ 113.9006

(3.) SPECIALTY _____ (4.) YEARS IN SPECIALTY _____

(5.) DRG (294-6) DIABETES AGE >=36

(6.) PRINCIPAL DIAGNOSIS: 25060-25061

(7.) PATIENT STATUS: UNSTABLE

(7.A) Dx: DIABETES MELLITUS, NEUROLOGIC COMPLICATIONS

CASE STUDY #294-6: For 3 months a 68-year-old veteran has had weakness and pain in the right lower leg and posterior thigh. The pain began abruptly and has become increasingly severe; it was not aggravated by walking. He has a 10-year history of insulin-dependent diabetes mellitus and prior to admission, was taking 45 U of lente insulin daily. Three days ago your PE revealed weakness of right knee flexion and in all movements of the right foot, atrophy of right ankle reflex, and hypesthesia of the right leg below the knee. Dorsalis pedis pulses were palpable bilaterally. Three days ago you admitted the patient because of a T. of 102 F, B.P. 100/50, P 100(reg), and began treatment for diabetes, infectious complications of diabetes and unstable vital signs. He is not improving, despite your aggressive treatment and Staphalecoccus aureus has been cultured from his blood, and his vital signs are deteriorating. What tests and procedures will you order to treat these problems and follow your therapeutic regimen? His prognosis is poor.

LEGEND OF CODES

Code	VALUE OF TEST	Code	FREQUENCY OF TESTS
1.	Highly necessary	1.	Once daily for one day only
2.	Moderately necessary	2.	Once daily for 2-3 days
3.	Somewhat necessary	3.	Once daily for 3-5 days
4.	Not necessary	4.	Once daily for >5 days
		5.	Other (enter own freq/days)
		6.	P.R.N. only
		7.	Once only on admission

DIRECTIONS: Fill in the sections below (8-10-11-12) based on the diagnosis in (7.A) above.

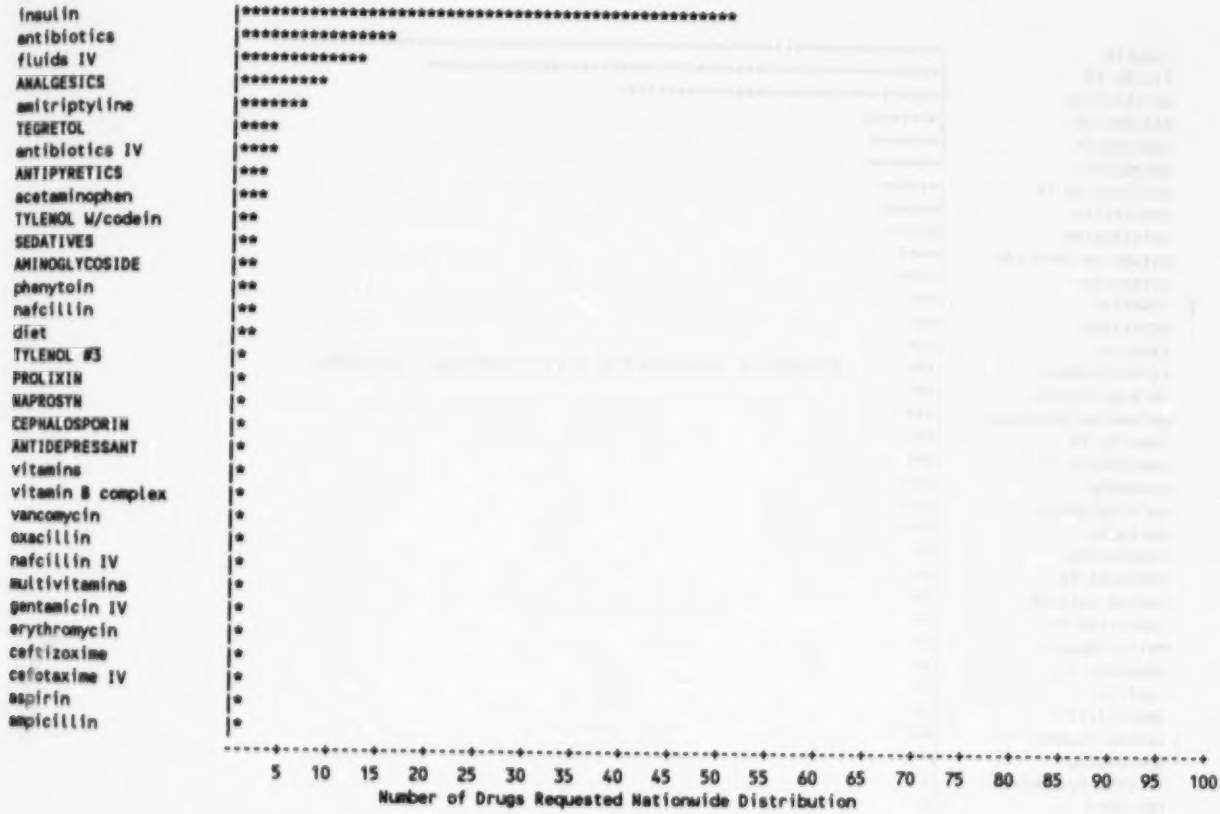
(8.) DIAGNOSTIC TEST(S) NEEDED (Do NOT use profile or instrument names for lab tests)	(9.) PURPOSE OF TEST	(10.) VALUE OF TEST CODE	(11.) FREQUENCY CODE	(12.) PHYSICIAN'S DRUG THERAPY Your Drug(s) of Choice Write in your drug(s) of Choice
1. _____		_____	_____	1. _____
2. _____		_____	_____	2. _____
3. _____		_____	_____	3. _____
4. _____	MONITOR	_____	_____	4. _____
5. _____	UNSTABLE	_____	_____	5. _____
6. _____		_____	_____	6. _____
7. _____		_____	_____	7. _____
8. _____	(DO	_____	_____	8. _____
9. _____	NOT	_____	_____	9. _____
10. _____	ENTER	_____	_____	10. _____
11. _____	DATA	_____	_____	11. _____
12. _____	IN THIS	_____	_____	12. _____
13. _____	COLUMN)	_____	_____	13. _____
14. _____		_____	_____	14. _____
15. _____		_____	_____	15. _____

COMMENTS:

Revised 9/84 EMT/NCC

DIABETEC AGE >36
PRIMARY DIAGNOSIS - DIABETES MELLITUS NEUROLOGIC COMPLICATIONS
NATIONWIDE HISTOGRAM FOR DRUGS
PATIENT'S CONDITION - STABLE

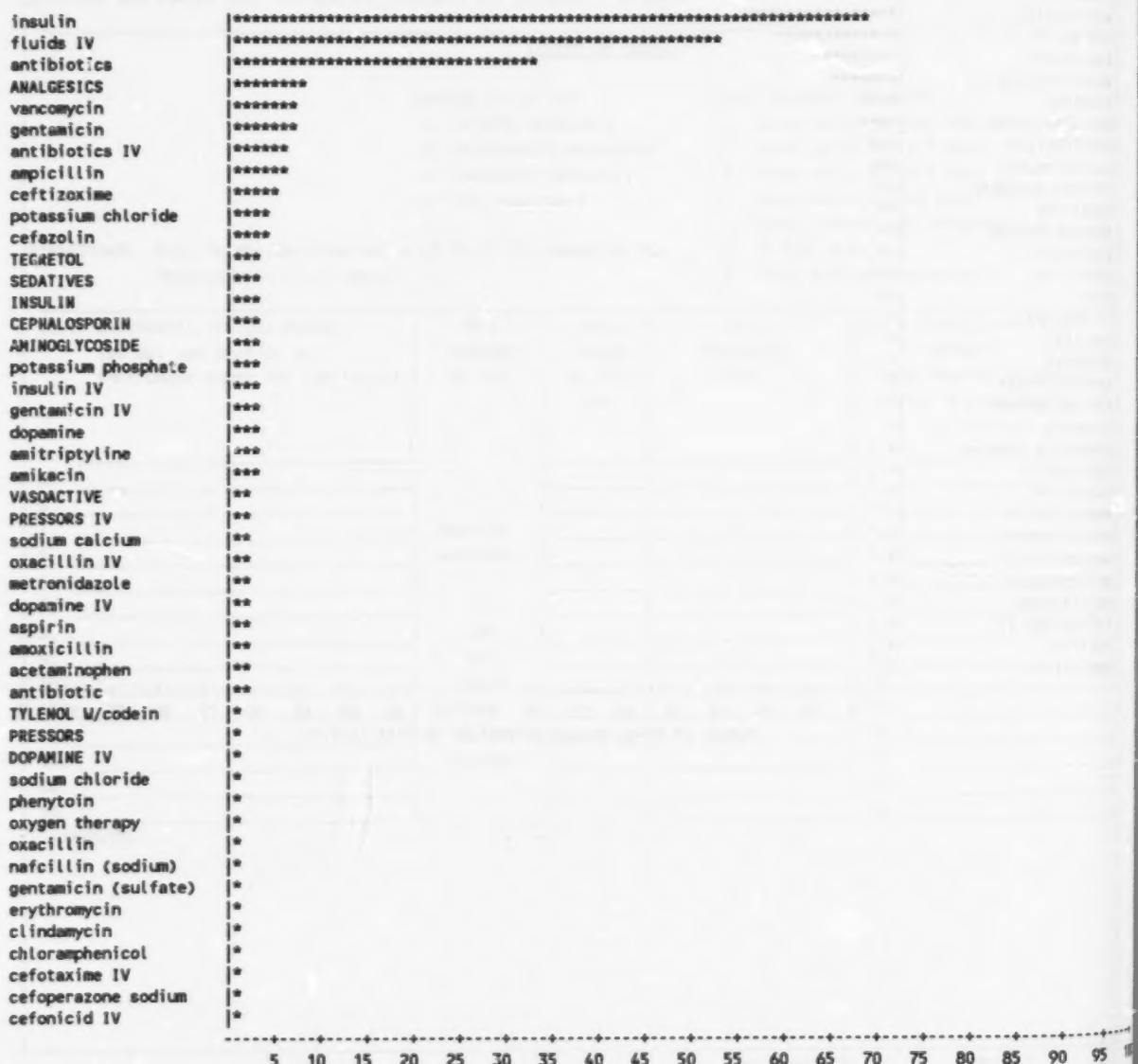
CASE STUDY: For 3 months a 68-year-old veteran has had weakness and pain in the right lower leg and posterior thigh. The pain began abruptly and has become increasingly severe; it is not aggravated by walking. He has a 10-year history of insulin-dependent diabetes mellitus and is currently taking 45 U of lente insulin daily. Physical exam reveals weakness of right knee flexion and in all movements of the right foot, atrophy of right ankle reflex, and hypesthesia of the right leg below the knee. Dorsalis pedis pulses are palpable bilaterally. What tests and procedures will you order to substantiate your clinical impression of diabetes mellitus with neurologic complications? What tests will you order to monitor your therapeutic regimen?



DRUGS UNSTABLE

DIABETES MELLITUS= >36
PRIMARY DIAGNOSIS - DIABETES MELLITUS NEUROLOGIC COMPLICATIONS
NATIONWIDE HISTOGRAM FOR DRUGS
PATIENT'S CONDITION UNSTABLE

CASE STUDY: For 3 months a 68-year-old veteran has had weakness and pain in the right lower leg and posterior thigh. The pain began abruptly and has become increasingly severe; it is not aggravated by walking. He has a 10-year history of insulin-dependent diabetes mellitus and is currently taking 45 U of lente insulin daily. Physical exam reveals weakness of right knee flexion and in all movements of the right foot, atrophy of right ankle reflex, and hypesthesia of the right leg below the knee. Dorsalis pedis pulses are palpable bilaterally. P.E. reveals pallor, sweating and a T of 102 F., B.P. 100/50, P. 100(reg), and significant A-V nicking. What screening tests and procedures will you order to substantiate your clinical impression of diabetes mellitus, with neurological and infectious complications?



CHRONIC OBSTRUCTIVE PULMONARY DISEASE

STABLE

DIAGNOSTIC PATTERNS OF CARE (DPC) - SURVEY FORM

(1) VAMC STATION NUMBER: _____ (2.) MEDICAL SCHOOL AFFILIATION_____ 113.1600

(3.) SPECIALTY _____ (4.) YEARS IN SPECIALTY _____

(5.) DRG (88) CHRONIC OBSTRUCTIVE PULMONARY DISEASE

(6.) PRINCIPAL DIAGNOSIS: 4911-74861

(7.) PATIENT STATUS: STABLE

(7.A) Dx: CHRONIC OBSTRUCTIVE PULMONARY DISEASE

CASE STUDY #881: A 62-year-old man is referred by a primary physician for evaluation of shortness of breath. Patient has smoked two packs of cigarettes per day for over 40 years. His exercise tolerance has gradually decreased over the past five years so that, at present, he cannot climb more than a flight of stairs without stopping to rest. On physical exam he appears thin and has an increased AP chest diameter. The expiratory phase respiration is prolonged. There is neither cyanosis nor edema. What screening tests and procedures will you order to establish your diagnosis of Chronic Obstructive Pulmonary Disease? What procedures and medication will order?

LEGEND OF CODES

Code	VALUE OF TEST	Code	FREQUENCY OF TESTS
1.	Highly necessary	1.	Once daily for one day only
2.	Moderately necessary	2.	Once daily for 2-3 days
3.	Somewhat necessary	3.	Once daily for 3-5 days
4.	Not necessary	4.	Once daily for >5 days
		5.	Other (enter own freq/days)
		6.	P.R.N. only
		7.	Once only on admission

DIRECTIONS: Fill in the sections below (8-10-11-12) based on the diagnosis in (7.A) above.

(8.) DIAGNOSTIC TEST(S) NEEDED (Do NOT use profile or instrument names for lab tests)	(9.) PURPOSE OF TEST	(10.) VALUE OF TEST CODE	(11.) FREQUENCY CODE	(12.) PHYSICIAN'S DRUG THERAPY Your Drug(s) of Choice Write in your drug(s) of Choice
1. _____		_____	_____	1. _____
2. _____		_____	_____	2. _____
3. _____		_____	_____	3. _____
4. _____	SCREENING	_____	_____	4. _____
5. _____	ADMISSION	_____	_____	5. _____
6. _____	ONLY	_____	_____	6. _____
7. _____		_____	_____	7. _____
8. _____	(DO	_____	_____	8. _____
9. _____	NOT	_____	_____	9. _____
10. _____	ENTER	_____	_____	10. _____
11. _____	DATA	_____	_____	11. _____
12. _____	IN THIS	_____	_____	12. _____
13. _____	COLUMN)	_____	_____	13. _____
14. _____		_____	_____	14. _____
15. _____	_____	_____	_____	15. _____

COMMENTS:

Revised 9/84 EMT/MCC

TESTS STABLE

CHRONIC OBSTRUCTIVE PULMONARY DISEASE
PRIMARY DIAGNOSIS - CHRONIC OBSTRUCTIVE PULMONARY DISEASE
PATIENT'S CONDITION - STABLE
1986 - 1989

CASE STUDY: A 62-year-old man is referred by a primary physician for evaluation of shortness of breath. Patient has smoked two packs of cigarettes per day for over 40 years. His exercise tolerance has gradually decreased over the past five years so that, at present, he cannot climb more than a flight of stairs without stopping to rest. On physical exam he appears thin and has an increased AP chest diameter. The expiratory phase respiration is prolonged. There is neither cyanosis nor edema. What screening tests and procedures will you order to establish your diagnosis of Chronic Obstructive Pulmonary Disease? What tests will you order to monitor your therapy?

BLOOD GAS, ARTERIAL	**********
PULMONARY FUNCT, NOS	**********
X RAY CHEST	**********
SPIROMETRY	**********
THEOPHYLLINE LEVEL	**********
CBC	**********
ELECTROCARDIOGRAM	**********
POTASSIUM	*********
SODIUM, SERUM	*********
CHLORIDE	********
CO2	********
BUN	*****
CREATININE	*****
C&S, BACT, SPUTUM	****
SMEAR, GRAM, SPUTUM	****
GLUCOSE, SERUM	****
LUNG VOLUMES	***
DIFFERENTIAL	***
SGOT	***
CYT, SPUTUM	***
AMINOPHYLLINE LEVEL	***
ALKALINE PHOSPHATASE	***

The following tests have a frequency distribution of 10 or less.

U A W/O MICROSCOPIC
NO TESTS
SGPT
ALBUMIN
LDH
BILIRUBIN, TOTAL
FLOW STUDY, NOS
DLCO
PHOSPHORUS
GLUCOSE, SERUM
CHOLESTEROL
CALCIUM
URIC ACID
SKIN TEST AFB
PROTEIN TOTAL
FLOW VOLUME LOOP
O2 SATURATION TEST
CPK
BLOOD GAS, VENOUS
BICARBONATE
ANTITRYPSIN
TRIGLYCERIDES
STRESS TEST
PROTEIN, TOTAL
PLETHYSMOGRAPH
METHYLXANTHINE LEVEL
GGTP
EOSINOPHILS
EAR OXIMETRY
C&S, BACT, BLOOD
BILIRUBIN, DIRECT
URINE VOLUMES
U A W/MICROSCOPIC
STOOL, OCCULT BLOOD
SPUTUM, EOSIN
SLEEP EAR OXIMETRY
SLEEP DURATION STUDY
SKIN TEST MUMPS
SED RATE
PULMONARY FUNCTION, NOS
PROTEIN, SERUM
MAX BREATH CAPACITY
EXERCISE TESTING
EXERCISE W/ABG ANALYSIS
EXERCISE NOCTURNAL
ECHOCARDIOGRAM
DIGOXIN LEVEL
CELL CYTOLOGY, SPUTUM
CARBOXYHGB
CARBON MONOXIDE
C&S, BACT, URINE
BRONCHOSCOPY, NOS

Number of Physicians answering survey for this disease - 92
Number of VAMCs answering survey for this disease - 31

20 40 60 80 100 120 140 160 180 200 220 240 260 280 300 320 340 360 380 400
Number of Tests Requested Nationwide Distribution*

* Represents the frequency of tests requested based on range listed on DPC survey form (reverse side)

TESTS UNSTABLE

CHRONIC OBSTRUCTIVE PULMONARY DISEASE
PRIMARY DIAGNOSIS - CHRONIC OBSTRUCTIVE PULMONARY DISEASE
NATIONWIDE HISTOGRAM
PATIENT'S CONDITION - UNSTABLE
1986 - 1989

CASE STUDY: A 62-year-old man was referred by a primary physician three days ago for evaluation of shortness of breath. Patient has smoked two packs of cigarettes per day for over 40 years. His exercise tolerance has gradually decreased over the past weeks so that, at present, he cannot climb a flight of stairs. On physical exam he appeared thin, was anxious and had marked cyanosis and edema and his temperature was 102.5 F. BP 100/50. Your screening and confirmatory tests and procedures established your diagnosis of Chronic Obstructive Pulmonary Disease with complications caused by a pulmonary infection and sepsis. What tests and procedures will you order to monitor your therapy and follow his clinical course, since he is not responding and has a guarded prognosis?

The following tests have a frequency distribution of 10 or less.

VITAL SIGNS
U A W/MICROSCOPIC
C&S, AFB, SPUTUM
BICARBONATE
PTT
PROTEIN, TOTAL
SWAN GANZ CATHETER (R)
SKIN TEST AFB
GENTAMICIN LEVEL
EAR OXIMETRY
DIGOXIN LEVEL
BRONCHOSCOPY, NOS
LUNG SCAN V/P
ANTIBIOTIC LEVEL
C&S, FUNGAL, NOS
URIC ACID
STOOL, OCCULT BLOOD
SED RATE
LUNG VOLUMES
CHOLESTEROL
BRONCHOSCOPY, BX
VITAL CAPACITY
NITROGLYCERIN THERAPY TEST
ECHOCARDIOGRAM
C&S, LEGIONELLA
C&S, FUNGUS, SPUTUM
RANION GAP
PLEUROCENTESIS
LEGIONELLA DFA
C&S, AFB, NOS
MAGNESIUM
FLOW VOLUME LOOP
FLOW STUDY, NOS
FIBRINOGEN
DRUG SCREEN
BILIRUBIN, DIRECT
WEDGE PRESSURE, PULMONARY
V/Q SCAN
TRIGLYCERIDES
THORACOTOMY
SPEP
PROTEIN, TOTAL
PLETHYSMOGRAPHY
METHYLXANTHINE LEVEL
LUMBAR PUNCTURE
LACTATE BLOOD
HIV TITER
FIBRIN DEGRADATION PRODUCTS
ENZYMES, LIVER
BRONCHOSCOPY, CYTOLOGY
VENTRICULOGRAM
ULTRASOUND CARDIAC
T-LYMPH CELL RAT
SPUTUM, EOSIN
SMEAR, GRAM, URINE
SKIN TEST MUMPS
SKIN TEST FUNGUS
PROTEIN, URINE
PROTEIN, SERUM
PRESSURE PULMONARY ARTERY
PK/MM AIRWAY PRESSURE
PARACENTESIS
O2 SATURATION TEST
MUGA SCAN, NOS
LUNG, BX
LDH ISOENZYMES
INTUBATION
I & O CHART
GRAM STAIN SPUTUM
GLOBULIN
ELECTROLYTES URINE
DLCO
CATHETER PULMONARY ARTERY
CARDIAC OUTPUT
C&S, VIRAL, SPUTUM
C&S, BACT, STOOL
C&S, BACT, NOS
C&S, BACT, ASCITIC FLUID
BRONCHOGRAM
ARTERIAL LINE
ANGIOGRAM, NOS
AMINOGLYCO LEVEL

Number of Physicians answering survey for this disease - 58
Number of VAMCs answering survey for this disease - 31

20 40 60 80 100 120 140 160 180 200 220 240 260 280 300 320 340 360 380 400
Number of Tests Requested Nationwide Distribution*

*Represents the frequency of tests requested based on range choices listed on DPC survy form (reverse side).

UNSTABLE

DIAGNOSTIC PATTERNS OF CARE (DPC) - SURVEY FORM

(1) VAMC STATION NUMBER: _____ (2.) MEDICAL SCHOOL AFFILIATION_____ 113.1605

(3.) SPECIALTY _____ (4.) YEARS IN SPECIALTY _____

(5.) DRG (88) CHRONIC OBSTRUCTIVE PULMONARY DISEASE

(6.) PRINCIPAL DIAGNOSIS: 4911-74861

(7.) PATIENT STATUS: UNSTABLE

(7.A) Dx: CHRONIC OBSTRUCTIVE PULMONARY DISEASE

CASE STUDY #886: A 62-year-old man was referred by a primary physician three days ago for evaluation of shortness of breath. Patient has smoked two packs of cigarettes per day for over 40 years. His exercise tolerance has gradually decreased over the past week so that, at present, he cannot climb a flight of stairs. On physical exam he appeared thin, was anxious and had marked cyanosis and edema and his temperature was 102.5 F, BP 100/50. Your screening and confirmatory tests and procedures established your diagnosis of Chronic Obstructive Pulmonary Disease with complications caused by a pulmonary infection and sepsis. What tests and procedures will you order to monitor your therapy and follow his clinical course, since he is not responding and has a guarded prognosis?

LEGEND OF CODES

Code	VALUE OF TEST	Code	FREQUENCY OF TESTS
1.	Highly necessary	1.	Once daily for one day only
2.	Moderately necessary	2.	Once daily for 2-3 days
3.	Somewhat necessary	3.	Once daily for 3-5 days
4.	Not necessary	4.	Once daily for >5 days
		5.	Other (enter own freq/days)
		6.	P.R.N. only
		7.	Once only on admission

DIRECTIONS: Fill in the sections below (8-10-11-12) based on the diagnosis in (7.A) above.

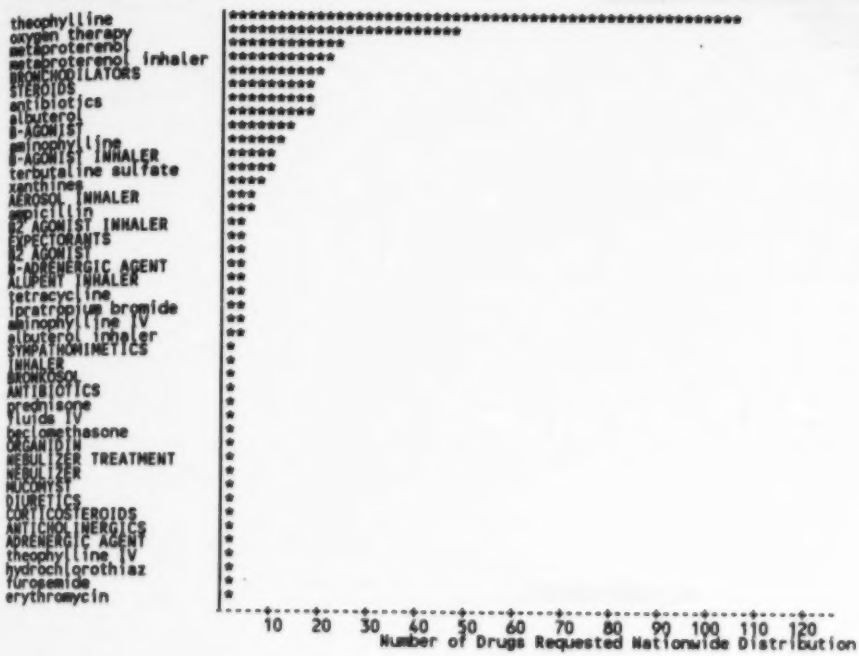
(8.) DIAGNOSTIC TEST(S) NEEDED (Do NOT use profile or instrument names for lab tests)	(9.) PURPOSE OF TEST	(10.) VALUE OF TEST CODE	(11.) FREQUENCY CODE	(12.) PHYSICIAN'S DRUG THERAPY Your Drug(s) of Choice Write in your drug(s) of Choice
1.				1.
2.				2.
3.				3.
4.	MONITOR			4.
5.	UNSTABLE			5.
6.				6.
7.				7.
8.	(DO			8.
9.	NOT			9.
10.	ENTER			10.
11.	DATA			11.
12.	IN THIS			12.
13.	COLUMN)			13.
14.				14.
15.				15.

COMMENTS:

Revised 9/84 EMT/MCC

CHRONIC OBSTRUCTIVE PULMONARY DISEASE
NATIONWIDE HISTOGRAM FOR DRUGS
PATIENT'S CONDITION - STABLE
1986 - 1989

CASE STUDY: A 62-year-old man is referred by a primary physician for evaluation of shortness of breath. Patient has smoked two packs of cigarettes per day for over 40 years. His exercise tolerance has gradually decreased over the past five years so that, at present, he cannot climb more than a flight of stairs without stopping to rest. On physical exam he appears thin and has an increased AP chest diameter. The expiratory phase respiration is prolonged. There is neither cyanosis nor edema. What screening tests and procedures will you order to establish your diagnosis of Chronic Obstructive Pulmonary Disease? What tests will you order to monitor your therapy?



DRUGS UNSTABLE

CHRONIC OBSTRUCTIVE PULMONARY DISEASE
NATIONWIDE HISTOGRAM FOR DRUGS
PATIENT'S CONDITION - UNSTABLE
1986 - 1989

CASE STUDY: A 62-year-old man was referred by a primary physician three days ago for evaluation of shortness of breath. Patient has smoked two packs of cigarettes per day for over 40 years. His exercise tolerance has gradually decreased over the past weeks so that, at present, he cannot climb a flight of stairs. On physical exam he appeared thin, was anxious and had marked cyanosis and edema and his temperature was 102.5 F, BP 100/50. Your screening and confirmatory tests and procedures established your diagnosis of Chronic Obstructive Pulmonary Disease with complications caused by a pulmonary infection and sepsis. What tests and procedures will you order to monitor your therapy and follow his clinical course, since he is not responding and has a guarded prognosis?

HYPERTENSION

DIAGNOSTIC PATTERNS OF CARE (DPC) - SURVEY FORM

(1) VAMC STATION NUMBER: _____ (2.) MEDICAL SCHOOL AFFILIATION_____ 113.1060

(3.) SPECIALTY _____ (4.) YEARS IN SPECIALTY _____

(5.) DRG (134) HYPERTENSION

(6.) PRINCIPAL DIAGNOSIS: 4010-40599

(7.) PATIENT STATUS: STABLE

(7.A) Dx: HYPERTENSION

CASE STUDY #1347: The patient is a 59-year-old white male, slightly obese with long hx hypertension. He has been sporadically treated with diuretics and a variety of other drugs. Last BP 6 mos ago, 170/104. He is being seen in the ER because of progressive fatigue, weakness, pedal edema and severe joint pains, particularly in toes and ankles; BP now, 150/95, pulse 90. What tests will you order to screen this patient and monitor your therapy?

LEGEND OF CODES

Code	VALUE OF TEST	Code	FREQUENCY OF TESTS
1.	Highly necessary	1.	Once daily for one day only
2.	Moderately necessary	2.	Once daily for 2-3 days
3.	Somewhat necessary	3.	Once daily for 3-5 days
4.	Not necessary	4.	Once daily for >5 days
		5.	Other (enter own freq/days)
		6.	P.R.N. only
		7.	Once only on admission

DIRECTIONS: Fill in the sections below (8-10-11-12) based on the diagnosis in (7.A) above.

(8.) DIAGNOSTIC TEST(S) NEEDED (Do NOT use profile or instrument names for lab tests)	(9.) PURPOSE OF TEST	(10.) VALUE OF TEST CODE	(11.) FREQUENCY CODE	(12.) PHYSICIAN'S DRUG THERAPY Your Drug(s) of Choice Write in your drug(s) of Choice
1.				1.
2.				2.
3.				3.
4.				4.
5.	ADMISSION			5.
6.	STABLE			6.
7.				7.
8.	(DO			8.
9.	NOT			9.
10.	ENTER			10.
11.	DATA			11.
12.	IN THIS			12.
13.	COLUMN)			13.
14.				14.
15.				15.

COMMENTS:

Revised 9/84 ENT/HCC

TESTS STABLE

HYPERTENSION
PRIMARY DIAGNOSIS - HYPERTENSION
NATIONWIDE HISTOGRAM
PATIENT'S CONDITION - STABLE
1986 - 1989

CASE STUDY: The patient is a 59-year-old white male, slightly obese with a long hx of hypertension. He has been sporadically treated with diuretics and a variety of other drugs. Last BP 6 mos ago, 170/104. He is being seen in the ER because of progressive fatigue, weakness, pedal edema and severe joint pains, particularly in toes and ankles; BP now, 150/95, pulse 90. What tests will you order to screen this patient and monitor your therapy?

The following tests have a frequency distribution of four or less.

TRIGLYCERIDES
PROTEIN, URINE
NO TESTS
X RAY FEET
VDRL, SERUM
SGOT
SED RATE
RENIN PLASMA
ELECTROLYTES URINE
DIFFERENTIAL
CPK
BLOOD GAS, ARTERIAL
BILIRUBIN, TOTAL
ASO TITER
U A W/MICROSCOPIC
U A VMA
SGPT
RENOGRAM, RADIOISOTOPES
PHOSPHORUS
LDH
ECHOCARDIOGRAM
DSA RENAL ARTERIES
CATECHOLAMINE, URINE
C&S, BACT, BLOOD
BILIRUBIN, DIRECT
BICARBONATE
ALKALINE PHOSPHATASE
ALDOSTERONE
X RAY ANKLES
X RAY ABDOMEN
VITAL SIGNS
ULTRASOUND KIDNEYS
T4
TITER RHEUM ARTH
THIOCYANATE LEVEL
RHEUMATOID FACTOR
RENIN STIMULATION
RENAL VEIN SMPLG
PT
MUGA SCAN, NOS
METANEPHRINES, URINE
LUMBAR PUNCTURE
IVP, HYPERTENSIVE
COOMBS
CATECHOLAMINE, SERUM
CAT SCAN RENAL
CAT SCAN HEAD
CAROTID DOPL STUDIES
ARTERIOGRAPHY
ARTERIOGRAM, NOS

Number of Physicians answering survey for this disease - 35
Number of VAMCs answering survey for this disease - 9

*Represents the frequency of tests requested based on range of choices listed on PPC survey form (reverse side).

HYPERTENSION
PRIMARY DIAGNOSIS - HYPERTENSION
NATIONWIDE HISTOGRAM
PATIENT'S CONDITION - UNSTABLE
1986 - 1989

CASE STUDY: A 59-year-old male was admitted three days ago after a long hx of hypertension. He had been sporadically treated with diuretics and a variety of other drugs. Last BP 6 mos ago, 170/104. He was admitted because of progressive fatigue, weakness, pedal edema and severe joint pains, particularly in toes and ankles; his left-sided weakness. What tests will you order to monitor your continuing treatment? What drugs will you order to improve his status and what tests will you order to follow your treatment?

*Represents the frequency of tests requested based on range of choices listed on DPC survey form (reserse side).

UNSTABLE

DIAGNOSTIC PATTERNS OF CARE (DPC) - SURVEY FORM

(1) VAMC STATION NUMBER: _____ (2.) MEDICAL SCHOOL AFFILIATION_____ 113.7006

(3.) SPECIALTY _____ (4.) YEARS IN SPECIALTY _____

(5.) DRG (134) HYPERTENSION

(6.) PRINCIPAL DIAGNOSIS: 4010-40599

(7.) PATIENT STATUS: UNSTABLE

(7.A) Dx: HYPERTENSION

CASE STUDY #13422: A 59-year-old male was admitted three days ago after a long hx hypertension. He had been sporadically treated with diuretics and a variety of other drugs. Last BP 6 mos ago, 170/104. He was admitted because of progressive fatigue, weakness, pedal edema and severe joint pains, particularly in toes and ankles; his blood pressure has not responded to your therapy and continues to remain at 210/110, with progressive signs of left-sided weakness. What tests will you order to monitor your continuing treatment? What drugs will you order to improve his status and what tests will you order to follow your treatment?

LEGEND OF CODES

Code	VALUE OF TEST	Code	FREQUENCY OF TESTS
1.	Highly necessary	1.	Once daily for one day only
2.	Moderately necessary	2.	Once daily for 2-3 days
3.	Somewhat necessary	3.	Once daily for 3-5 days
4.	Not necessary	4.	Once daily for >5 days
		5.	Other (enter own freq/days)
		6.	P.R.N. only
		7.	Once only on admission

DIRECTIONS: Fill in the sections below (8-10-11-12) based on the diagnosis in (7.A) above.

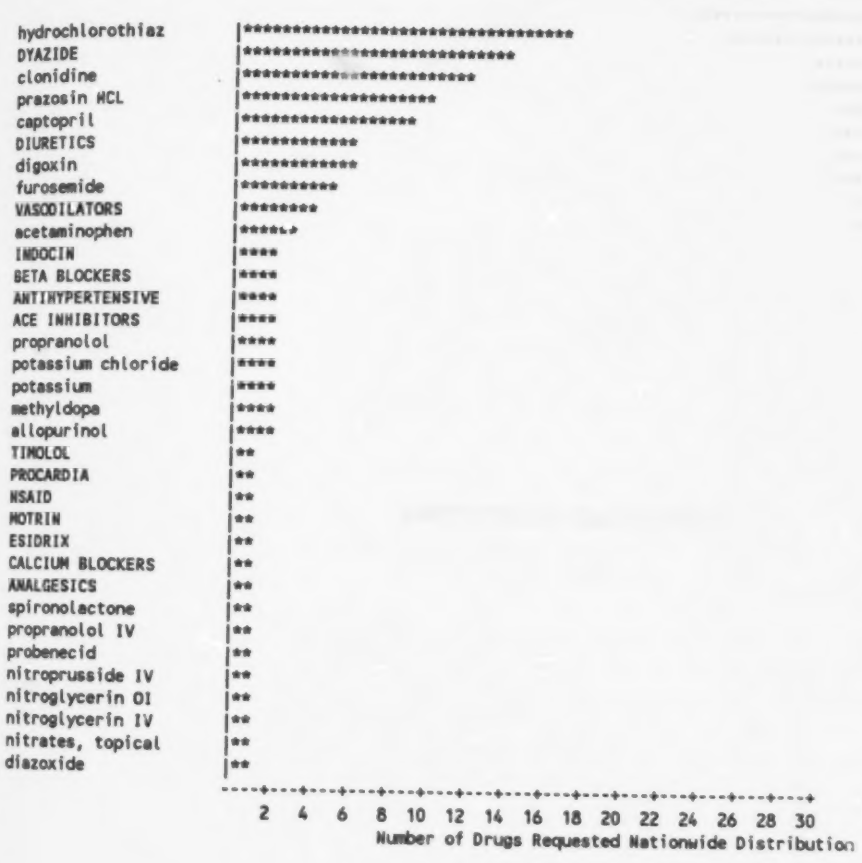
(8.) DIAGNOSTIC TEST(S) NEEDED (Do NOT use profile or instrument names for lab tests)	(9.) PURPOSE OF TEST	(10.) VALUE OF TEST CODE	(11.) FREQUENCY CODE	(12.) PHYSICIAN'S DRUG THERAPY Your Drug(s) of Choice Write in your drug(s) of Choice
1. _____		_____	_____	1. _____
2. _____		_____	_____	2. _____
3. _____		_____	_____	3. _____
4. _____	MONITOR	_____	_____	4. _____
5. _____	UNSTABLE	_____	_____	5. _____
6. _____		_____	_____	6. _____
7. _____		_____	_____	7. _____
8. _____	(DO	_____	_____	8. _____
9. _____	NOT	_____	_____	9. _____
10. _____	ENTER	_____	_____	10. _____
11. _____	DATA	_____	_____	11. _____
12. _____	IN THIS	_____	_____	12. _____
13. _____	COLUMN)	_____	_____	13. _____
14. _____		_____	_____	14. _____
15. _____		_____	_____	15. _____

COMMENTS:

Revised 9/84 EMT/MCC

HYPERTENSION
NATIONWIDE HISTOGRAM FOR DRUGS
PATIENT'S CONDITION - STABLE
1986 - 1989

CASE STUDY: The patient is a 59-year-old white male, slightly obese with a long hx of hypertension. He has been sporadically treated with diuretics and a variety of other drugs. Last BP 6 mos ago, 170/104. He is being seen in the ER because of progressive fatigue, weakness, pedal edema and severe joint pains, particularly in toes and ankles; BP now, 150/95, pulse 90. What tests will you order to screen this patient and monitor your therapy?



DRUGS UNSTABLE

HYPERTENSION
NATIONWIDE HISTOGRAM FOR DRUGS
PATIENT'S CONDITION - UNSTABLE
1986 - 1989

CASE STUDY: A 59-year-old male was admitted three days ago after a long hx of hypertension. He had been sporadically treated with diuretics and a variety of other drugs. Last BP 6 mos ago, 170/104. He was admitted because of progressive fatigue, weakness, pedal edema and severe joint pains, particularly in toes and ankles; his left-sided weakness. What tests will you order to monitor your continuing treatment? What drugs will you order to improve his status and what tests will you order to follow your treatment?

VENTRICULAR TACHYCARDIA

STABLE

DIAGNOSTIC PATTERNS OF CARE (DPC) - SURVEY FORM

(1) VAMC STATION NUMBER: _____ (2.) MEDICAL SCHOOL AFFILIATION_____ 1138000A

(3.) SPECIALTY _____ (4.) YEARS IN SPECIALTY _____

(5.) DRG (139) CARDIAC ARRHYTHMIA & CONDUCTION DISORDERS AGE <=70 W/O CC

(6.) PRINCIPAL DIAGNOSIS: 7850 TACHYCARDIA

(7.) PATIENT STATUS: STABLE

(7.A) Dx: VENTRICULAR TACHYCARDIA

CASE STUDY #139-10: A 57-year-old man is admitted directly to the coronary care unit with a regular tachycardia (190/min) with wide QRS complexes. Because he had hypotension, confusion, and diaphoresis, he had cardioversion soon after arrival. After sinus rhythm was re-established, the 12-lead electrocardiogram showed an old anteroseptal infarction. The patient had a heart attack 2 years ago and has had three episodes of palpitation and cardiovascular collapse with need for cardioversion since then. What screening tests and procedures will you order to substantiate your clinical impression of cardiac arrythmia? What tests will you order to monitor your treatment?

LEGEND OF CODES

Code	VALUE OF TEST	Code	FREQUENCY OF TESTS
1.	Highly necessary	1.	Once daily for one day only
2.	Moderately necessary	2.	Once daily for 2-3 days
3.	Somewhat necessary	3.	Once daily for 3-5 days
4.	Not necessary	4.	Once daily for >5 days
		5.	Other (enter own freq/days)
		6.	P.R.N. only
		7.	Once only on admission

DIRECTIONS: Fill in the sections below (8-10-11-12) based on the diagnosis in (7.A) above.

(8.) DIAGNOSTIC TEST(S) NEEDED (Do NOT use profile or instrument names for lab tests)	(9.) PURPOSE OF TEST	(10.) VALUE OF TEST CODE	(11.) FREQUENCY CODE	(12.) PHYSICIAN'S DRUG THERAPY Your Drug(s) of Choice Write in your drug(s) of Choice
1.				1.
2.				2.
3.				3.
4.	SCREENING			4.
5.	ADMISSION			5.
6.				6.
7.				7.
8.	(DO			8.
9.	NOT			9.
10.	ENTER			10.
11.	DATA			11.
12.	IN THIS			12.
13.	COLUMN)			13.
14.				14.
15.				15.

COMMENTS:

Revised 9/84 EMT/MCC

TESTS STABLE

CARDIAC ARRHYTHMIA AND CONDUCTION DISORDERS AGE <70 W/O C.C.
PRIMARY DIAGNOSIS - VENTRICULAR TACHYCARDIA
NATIONWIDE HISTOGRAM
PATIENT'S CONDITION - STABLE
1986 - 1989

CASE STUDY: A 57-year-old man is admitted directly to the coronary care unit with a regular tachycardia (190/min) with wide QRS complexes. Because he had hypotension, confusion, and diaphoresis, he had cardioversion soon after arrival. After sinus rhythm was re-established, the 12-lead electrocardiogram showed an old anteroseptal infarction. The patient had a heart attack 2 years ago and has had three episodes of palpitation and cardiovascular collapse with need for cardioversion since then. What screening tests and procedures will you order to substantiate your clinical impression of cardiac arrythmia? What tests will you order to monitor your treatment?

*Represents the frequency of tests requested based on range of choices listed on DPC survey form (reverse side).

TESTS UNSTABLE

CARDIAC ARRHYTHIMIA AND CONDUCTION DISORDERS AGE <70 W/O C.C.
PRIMARY DIAGNOSIS - VENTRICULAR TACHYCARDIA
NATIONWIDE HISTOGRAM
PATIENT'S CONDITION - UNSTABLE
1986 - 1989

CASE STUDY: A 57-year-old man was admitted to the coronary care unit three days ago with regular tachycardia (190/min) with wide QRS complexes. Because he had hypotension (100/50), confusion, and diaphoresis, you performed cardioversion soon after arrival. After sinus rhythm was re-established, the 12-lead electrocardiogram showed an old anteroseptal infarction. The patient had a heart attack 2 years ago and has had three episodes of palpitation and cardiovascular collapse with need for cardioversion since then. Despite your aggressive treatment, his arrthymia, hypotension and confusion have continued. His color is poor and he is beginning to show signs of congestive heart failure. What tests and procedures will you order to follow the course of his illness, its complications and your subsequent treatment? His prognosis is poor.

The following tests have a frequency distribution of four or less.

MAGNESIUM
CPK-MB
CPK
C&S, BACT, BLOOD
SGPT
PTT
PT
GLUCOSE, SERUM
ENZYMES, LIVER
BILIRUBIN, TOTAL
ALKALINE PHOSPHATASE
U A W/O MICROSCOPIC
T4
T3
SED RATE
ECHO, 2D
DIGOXIN LEVEL
CBC
CALCIUM
C&S, BACT, URINE

Number of Physicians answering survey for this disease - 2
Number of VAMCs answering survey for this survey - 1

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25
Number of Tests Requested Nationwide Distribution*

*Represents the frequency of tests requested based on range of choices listed on DPC survey form (reverse side).

UNSTABLE

DIAGNOSTIC PATTERNS OF CARE (DPC) - SURVEY FORM

(1) VAMC STATION NUMBER: _____ (2.) MEDICAL SCHOOL AFFILIATION_____ 113.8004

(3.) SPECIALTY _____ (4.) YEARS IN SPECIALTY _____

(5.) DRG (139) CARDIAC ARRHYTHMIA & CONDUCTION DISORDERS AGE <=70 W/O CC

(6.) PRINCIPAL DIAGNOSIS: 7850 TACHYCARDIA

(7.) PATIENT STATUS: UNSTABLE

(7.A) Dx: VENTRICULAR TACHYCARDIA

CASE STUDY #139-14: A 57-year-old man was admitted to the coronary care unit three days ago with regular tachycardia (190/min) with wide QRS complexes. Because he had hypotension (100/50), confusion, and diaphoresis, you performed cardioversion soon after arrival. After sinus rhythm was re-established, the 12-lead electrocardiogram showed an old anteroseptal infarction. The patient had a heart attack 2 years ago and has had three episodes of palpitation and cardiovascular collapse with need for cardioversion since then. Despite your aggressive treatment, his arrthymia, hypotension and confusion have continued. His color is poor and he is beginning to show signs of congestive heart failure. What tests and procedures will you order to follow the course of his illness, its complications and your subsequent treatment? His prognosis is poor.

LEGEND OF CODES

Code	VALUE OF TEST	Code	FREQUENCY OF TESTS
1.	Highly necessary	1.	Once daily for one day only
2.	Moderately necessary	2.	Once daily for 2-3 days
3.	Somewhat necessary	3.	Once daily for 3-5 days
4.	Not necessary	4.	Once daily for >5 days
		5.	Other (enter own freq/days)
		6.	P.R.N. only
		7.	Once only on admission

DIRECTIONS: Fill in the sections below (8-10-11-12) based on the diagnosis in (7.A) above.

(8.) DIAGNOSTIC TEST(S) NEEDED (Do NOT use profile or instrument names for lab tests)	(9.) PURPOSE OF TEST	(10.) VALUE OF TEST CODE	(11.) FREQUENCY CODE	(12.) PHYSICIAN'S DRUG THERAPY Your Drug(s) of Choice Write in your drug(s) of Choice
1.				1.
2.				2.
3.				3.
4.	MONITOR			4.
5.	UNSTABLE			5.
6.				6.
7.				7.
8.	(DO			8.
9.	NOT			9.
10.	ENTER			10.
11.	DATA			11.
12.	IN THIS			12.
13.	COLUMN)			13.
14.				14.
15.				15.

COMMENTS:

Revised 9/84 EMT/MCC

STABLE

CARDIAC ARRHYTHMIA AND CONDUCTION DISORDERS AGE <70 1/0 C.C.

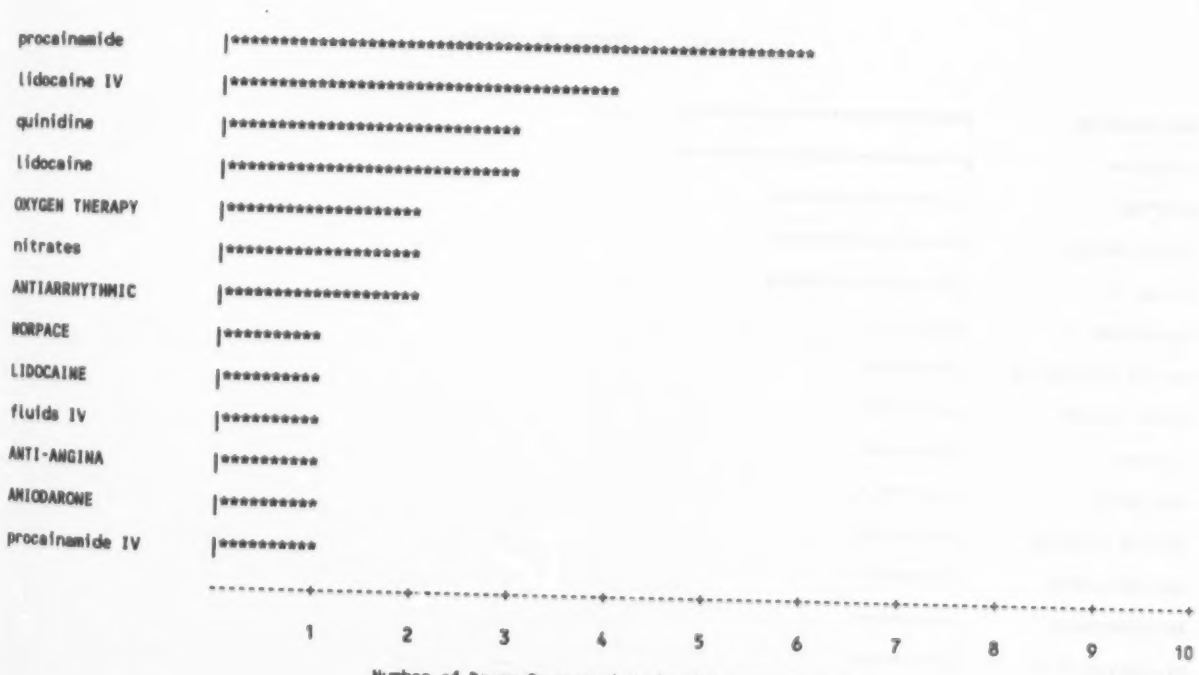
PRIMARY DIAGNOSIS - VENTRICULAR TACHYCARDIA

NATIONWIDE HISTOGRAM FOR DRUGS

PATIENT'S CONDITION - STABLE

1986 - 1989

CASE STUDY: A 57-year-old man is admitted directly to the coronary care unit with a regular tachycardia (190/min) with wide QRS complexes. Because he had hypotension, confusion, and diaphoresis, he had cardioversion soon after arrival. After sinus rhythm was re-established, the 12-lead electrocardiogram showed an old anteroseptal infarction. The patient had a heart attack 2 years ago and has had three episodes of palpitation and cardiovascular collapse with need for cardioversion since then. What screening tests and procedures will you order to substantiate your clinical impression of cardiac arrythmia? What tests will you order to monitor your treatment?



UNSTABLE

CARDIAC ARRHYTHMIA AND CONDUCTION DISORDERS AGE <70 W/O C.C.

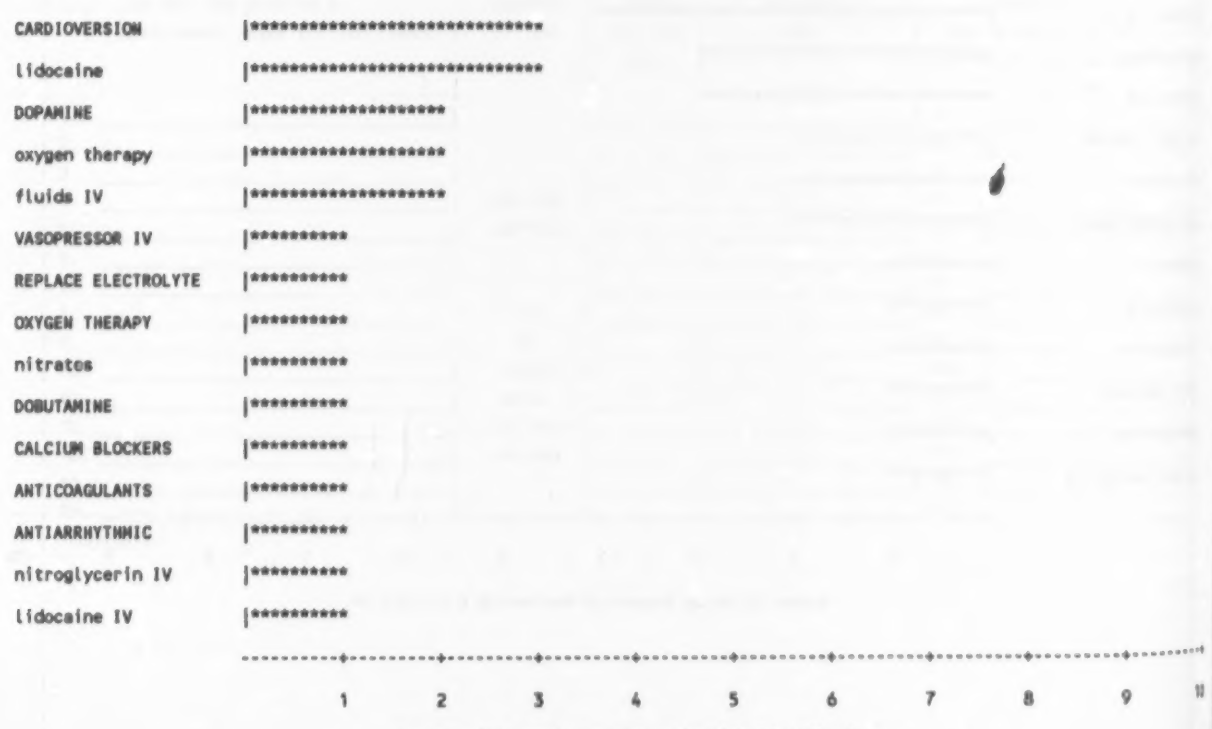
PRIMARY DIAGNOSIS - VENTRICULAR TACHYCARDIA

NATIONWIDE HISTOGRAM FOR DRUGS

PATIENT'S CONDITION - UNSTABLE

1986 - 1989

CASE STUDY: A 57-year-old man was admitted to the coronary care unit three days ago with regular tachycardia (190/min) with wide QRS complexes. Because he had hypotension (100/50), confusion, and diaphoresis, you performed cardioversion soon after arrival. After sinus rhythm was re-established, the 12-lead electrocardiogram showed an old anteroseptal infarction. The patient had a heart attack 2 years ago and has had three episodes of palpitation and cardiovascular collapse with need for cardioversion since then. Despite your aggressive treatment, his arrthymia, hypotension and confusion have continued. His color is poor and he is beginning to show signs of congestive heart failure. What tests and procedures will you order to follow the course of his illness, its complications and your subsequent treatment? His prognosis is poor.



HEART FAILURE + SHOCK

HEART FAILURE + SHOCK
PRIMARY DIAGNOSIS - HEART FAILURE + SHOCK
NATIONWIDE HISTOGRAM
PATIENT'S CONDITION - UNSTABLE
1986 - 1989

CASE STUDY: A 52-year-old man was seen in the emergency room yesterday with irregular tachycardia, with a ventricular rate of 250/min, a blood pressure of 80/60mm Hg, and a prolonged QRS complex. He was short of breath, but was not diaphoretic and has no chest pain. You performed screening tests and procedures to establish your clinical impression of heart failure with shock. He has not responded well to your treatment regimen. What tests and procedures will you order to confirm you diagnosis of heart failure with shock What tests will you order to monitor your therapy?

The following tests have a frequency distribution of four or less.

02 SATURATION TEST
VENTRICULOGRAM
U A W/MICROSCOPIC
TELEMETRY MONITORING
PROTEIN, TOTAL
MUGA, SCAN, NOS PULMONARY ARTERY
HOLTER MONITORING
EKC ESOPH
CARDIOVERSION
ALBUMIN
URINE, 24HRLT BLOOD
QUIDINE LEVEL
LUNG SCAN, V/P
HEMODYNAMIC MONITORING
GLOBULIN
ELECTROPHYSIO TEST
ARTERIAL LINE
TSH
INTRA-ARTERY PRESSURE MONITORING
BILIRUBIN, DIRECT
ANGIOGRAM, CORONARY
OSMOLARITY, URINE
OSMOLARITY, SERUM
LIDOCAINE LEVEL
GLUCOSE
GGTP
FREE THYROXIN INDEX
FIBRINOGEN
ENZYMES, NOS
CENTRAL VENOUS PRESSURE
CAROT SINUS STIMULATION WITH EKG MONITOR
C&S, BACT, URINE
C&S, BACT, SPUTUM
ARTERIOGRAM, NOS
AORTIC BALLOON PUMP
ANTIARRHYTHMIC LEVEL

Number of Physicians answering survey for this disease = 62
Number of VAMCs answering survey for this disease - 19

10 20 30 40 50 60 70 80 90 100 110 120 130 140 150 160 170 180
Number of Tests Requested Nationwide Distribution*

*Represents the frequency of tests requested based on range of choices listed on DPC survey form (reverse side).

best copy available

DIAGNOSTIC PATTERNS OF CARE (DPC) - SURVEY FORM

113.1500

(1) VAMC STATION NUMBER: _____ (2.) MEDICAL SCHOOL AFFILIATION_____

(3.) SPECIALTY _____ (4.) YEARS IN SPECIALTY _____

(5.) DRG (127) HEART FAILURE + SHOCK

(6.) PRINCIPAL DIAGNOSIS: 39891,40201,40291,4280-81,4289,78550-59

(7.) PATIENT STATUS: UNSTABLE

(7.A) Dx: HEART FAILURE + SHOCK

CASE STUDY #127-1: A 52-year-old man was seen in the emergency room yesterday with irregular tachycardia, with a ventricular rate of 250/min, a blood pressure of 80/60mm Hg, and a prolonged QRS complex. He was short of breath, but was not diaphoretic and has no chest pain. You performed screening tests and procedures to establish your clinical impression of heart failure with shock. He has not responded well to your treatment regimen. What tests and procedures will you order to confirm you diagnosis of heart failure with shock? What tests will you order to monitor your therapy?

LEGEND OF CODES

Code VALUE OF TEST
1. Highly necessary
2. Moderately necessary
3. Somewhat necessary
4. Not necessary

Code FREQUENCY OF TESTS
1. Once daily for one day only
2. Once daily for 2-3 days
3. Once daily for 3-5 days
4. Once daily for >5 days
5. Other (enter own freq/days)
6. P.R.N. only
7. Once only on admission

DIRECTIONS: Fill in the sections below (8-10-12) based on the diagnosis in (7.A) above.

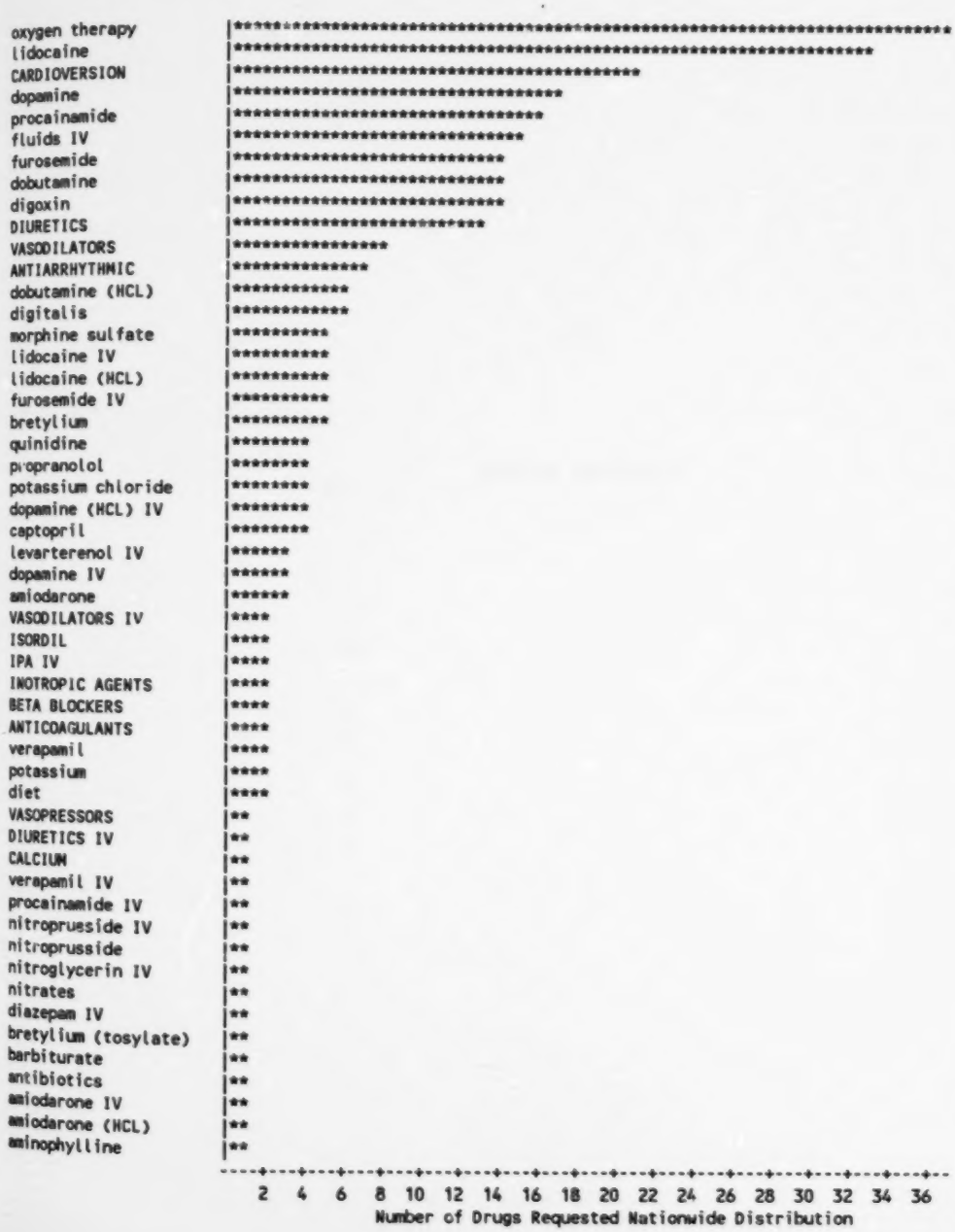
(8.) DIAGNOSTIC TEST(S) NEEDED (Do NOT use profile or instrument names for lab tests)	(9.) PURPOSE OF TEST	(10.) VALUE OF TEST CODE	(11.) FREQUENCY CODE	(12.) PHYSICIAN'S DRUG THERAPY Your Drug(s) of Choice Write in your drug(s) of Choice
1.	CONFIRM UNSTABLE (DO NOT ENTER DATA IN THIS COLUMN)			1.
2.				2.
3.				3.
4.				4.
5.				5.
6.				6.
7.				7.
8.				8.
9.				9.
10.				10.
11.				11.
12.				12.
13.				13.
14.				14.
15.				15.

COMMENTS:

Revised 9/84 EMT/HCC

HEART FAILURE + SHOCK
NATIONWIDE HISTOGRAM FOR DRUGS
PATIENT'S CONDITON - UNSTABLE
1986 - 1989

CASE STUDY: A 52-year-old man was seen in the emergency room yesterday with irregular tachycardia, with a ventricular rate of 250/min, a blood pressure of 80/60mm Hg, and a prolonged QRS complex. He was short of breath, but was not diaphoretic and has no chest pain. You performed screening tests and procedures to establish your clinical impression of heart failure with shock. He has not responded well to your treatment regimen. What tests and procedures will you order to confirm you diagnosis of heart failure with shock What tests will you order to monitor your therapy?



ANGINA PECTORIS

DIAGNOSTIC PATTERNS OF CARE (DPC) - SURVEY FORM

(1) VAMC STATION NUMBER: (2.) MEDICAL SCHOOL AFFILIATION: _____ 113.1202

(3.) SPECIALTY _____ (4.) YEARS IN SPECIALTY _____

(5.) DRG (140) ANGINA PECTORIS

(6.) PRINCIPAL DIAGNOSIS: 4139

(7.) PATIENT STATUS: STABLE

(7.A) Dx: ANGINA PECTORIS

CASE STUDY #140-2: You are asked to see a 59-year-old caucasian male veteran who has had recurrent episodes of subxiphoid and retrosternal chest pressure for the past six months. A coronary arteriogram four months ago showed no fixed obstruction in the coronary arteries, but spasm of the midportion of the left circumflex coronary artery occurred during the study that was associated with S-T segment elevation. The patient's vital signs are stable. What screening tests will you order to substantiate your clinical impression of angina pectoris? What tests will you order to monitor your therapeutic regimen?

LEGEND OF CODES

Code VALUE OF TEST
1. Highly necessary
2. Moderately necessary
3. Somewhat necessary
4. Not necessary

Code FREQUENCY OF TESTS
1. Once daily for one day only
2. Once daily for 2-3 days
3. Once daily for 3-5 days
4. Once daily for >5 days
5. Other (enter own freq/days)
6. P.R.N. only
7. Once only on admission

DIRECTIONS: Fill in the sections below (8-10-11-12) based on the diagnosis in (7.A) above.

(8.) DIAGNOSTIC TEST(S) NEEDED (Do NOT use profile or instrument names for lab tests)	(9.) PURPOSE OF TEST	(10.) VALUE OF TEST CODE	(11.) FREQUENCY CODE	(12.) PHYSICIAN'S DRUG THERAPY Your Drug(s) of Choice Write in your drug(s) of Choice
1.				1.
2.				2.
3.				3.
4.	ADMISSION			4.
5.	STABLE			5.
6.				6.
7.				7.
8.	(DO			8.
9.	NOT			9.
10.	ENTER			10.
11.	DATA			11.
12.	IN THIS			12.
13.	COLUMN)			13.
14.				14.
15.				15.

COMMENTS:

Revised 9/84 EMT/MCC

TESTS STABLE

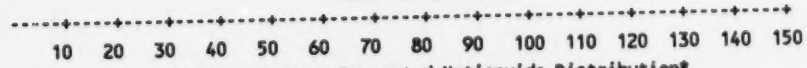
ANGINA PECTORIS
PRIMARY DIAGNOSIS - ANGINA PECTORIS
NATIONWIDE HISTOGRAM
PATIENT'S CONDITION - STABLE
1986 - 1989

CASE STUDY: You are asked to see a 59-year-old caucasian male veteran who has had recurrent episodes of subxiphoid and retrosternal chest pressure for the past six months. A coronary arteriogram four months ago showed no fixed obstruction in the coronary arteries, but spasm of the midportion of the left circumflex coronary artery occurred during the study that was associated with S-T segment elevation. The patient's vital signs are stable. What screening tests will you order to substantiate your clinical impression of angina pectoris? What tests will you order to monitor your therapeutic regimen?

The following tests have a frequency distribution of four or less.

ECHOCARDIOGRAM
ULTRASOUND GALL BLADDER
U A W/O MICROSCOPIC
TREADMILL TEST
GLOBULIN
ESOPHAGEAL MONITORING
CARDIAC MONITORING (L)
CARDIAC CATHETER
ALBUMIN
STOOL, OCCULT BLOOD
PT
MUGA, EXERCISE
GALL BLADDER STUDIES
ENZYMES, NOS
ENDOSCOPY
CALCIUM
BILIRUBIN, TOTAL
BERNSTEIN TEST
ANGIOGRAM, CORONARY
VENTRICULOGRAM
URIC ACID
UGI SERIES W/SBF
THALLIUM TEST
TELEMETRY MONITORING
SONOGRAM, ABDOMEN
PTT
PROTEIN, TOTAL
CAT SCAN CHEST
BLOOD GAS, ARTERIAL

Number of Physicians answering survey for this disease - 40
Number of VAMCs answering survey for this disease - 17



Number of Tests Requested Nationwide Distribution*

*Represents the frequency of tests requested based on range of choices listed on DPC survey form (reverse side).

ANGINA PECTORIS
PRIMARY DIAGNOSES - ANGINA PECTORIE
NATIONWIDE HISTOGRAM
PATIENT'S CONDITION - UNSTABLE
1986 - 9189

CASE STUDY: You are asked to see a 59-year-old caucasian male veteran who has had recurrent episodes of subxiphoid and retrosternal chest pressure for the past six months. A coronary arteriogram four months ago showed no fixed obstruction in the coronary arteries, but spasm of the midportion of the left circumflex coronary artery occurred during the study that was associated with S-T segment elevation. He was admitted two days ago for recurring subxiphoid chest pressure, BP 100/50, P. 100 (and irregular). His chest pressure has become more intense and no longer responds to nitroglycerin. What tests will you order to evaluate his status and monitor your treatment?

*Represents the frequency of tests requested based on range of choices listed on DPC survy form (reverse side).

UNSTABLE

DIAGNOSTIC PATTERNS OF CARE (DPC) - SURVEY FORM

(1) VAMC STATION NUMBER: _____ (2.) MEDICAL SCHOOL AFFILIATION_____ 113.1206

(3.) SPECIALTY _____ (4.) YEARS IN SPECIALTY _____

(5.) DRG (140) ANGINA PECTORIS

(6.) PRINCIPAL DIAGNOSIS: 4139

(7.) PATIENT STATUS: UNSTABLE

(7.A) Dx: ANGINA PECTORIS

CASE STUDY #140-10: You are asked to see a 59-year-old caucasian male veteran who has had recurrent episodes of subxiphoid and retrosternal chest pressure for the past six months. A coronary arteriogram four months ago showed no fixed obstruction in the coronary arteries, but spasm of the midportion of the left circumflex coronary artery occurred during the study that was associated with S-T segment elevation. He was admitted two days ago for recurring subxiphoid chest pressure, BP 100/50, P. 100 (and irregular). His chest pressure has become more intense and no longer responds to nitroglycerin. What tests will you order to evaluate his status and monitor your treatment?

LEGEND OF CODES

Code VALUE OF TEST
1. Highly necessary
2. Moderately necessary
3. Somewhat necessary
4. Not necessary

Code FREQUENCY OF TESTS
1. Once daily for one day only
2. Once daily for 2-3 days
3. Once daily for 3-5 days
4. Once daily for >5 days
5. Other (enter own freq/days)
6. P.R.N. only
7. Once only on admission

DIRECTIONS: Fill in the sections below (8-10-11-12) based on the diagnosis in (7.A) above.

(8.) DIAGNOSTIC TEST(S) NEEDED (Do NOT use profile or instrument names for lab tests)	(9.) PURPOSE OF TEST	(10.) VALUE OF TEST CODE	(11.) FREQUENCY CODE	(12.) PHYSICIAN'S DRUG THERAPY Your Drug(s) of Choice Write in your drug(s) of Choice
1.				1.
2.				2.
3.				3.
4.	MONITOR			4.
5.	UNSTABLE			5.
6.				6.
7.				7.
8.	(DO			8.
9.	NOT			9.
10.	ENTER			10.
11.	DATA			11.
12.	IN THIS			12.
13.	COLUMN)			13.
14.				14.
15.				15.

COMMENTS:

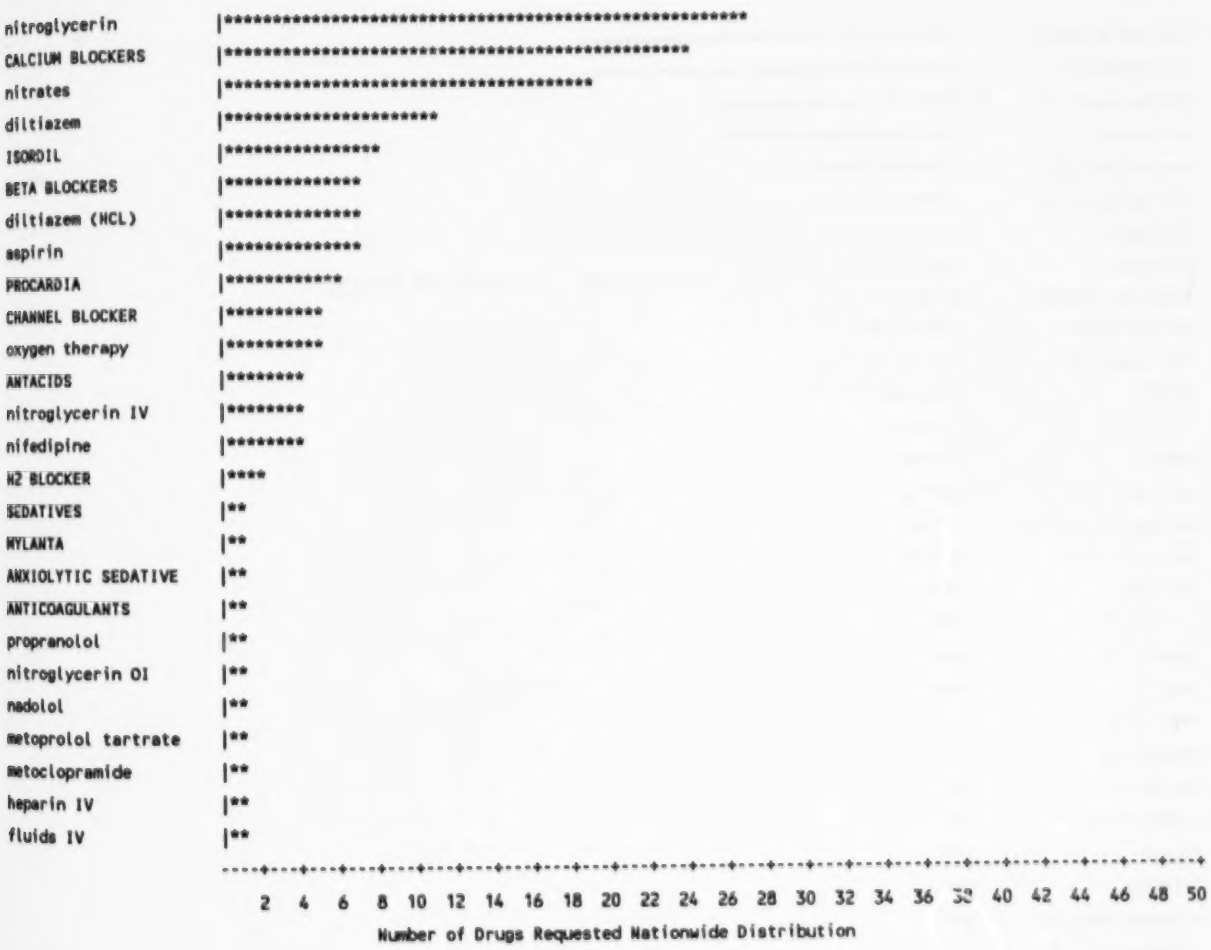
Revised 9/84 EMT/MCC

ANGINA PECTORIS

NATIONWIDE HISTROGRAM FOR DRUGS

PATIENT'S CONDITION - STABLE

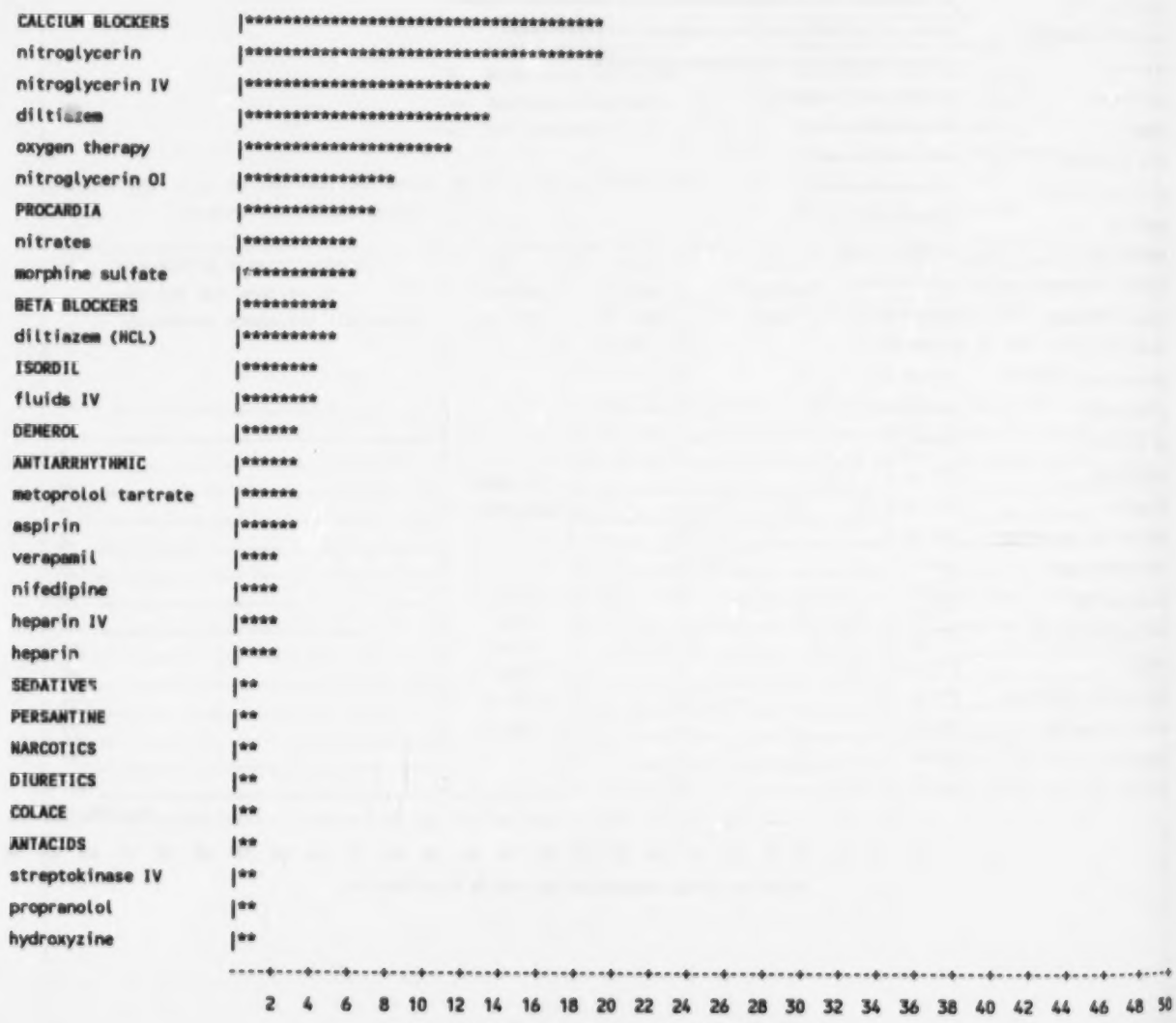
CASE STUDY: You are asked to see a 59-year-old caucasian male veteran who has had recurrent episodes of subxiphoid and retrosternal chest pressure for the past six months. A coronary arteriogram four months ago showed no fixed obstruction in the coronary arteries, but spasm of the midportion of the left circumflex coronary artery occurred during the study that was associated with S-T segment elevation. The patient's vital signs are stable. What screening tests will you order to substantiate your clinical impression of angina pectoris? What tests will you order to monitor your therapeutic regimen?



DRUGS UNSTABLE

ANGINA PECTORIS
NATIONWIDE HISTROGRAM FOR DRUGS
PATIENT'S CONDITION - UNSTABLE

CASE STUDY: You are asked to see a 59-year-old caucasian male veteran who has had recurrent episodes of subxiphoid and retrosternal chest pressure for the past six months. A coronary arteriogram four months ago showed no fixed obstruction in the coronary arteries, but spasm of the midportion of the left circumflex coronary artery occurred during the study that was associated with S-T segment elevation. He was admitted two days ago for recurring subxiphoid chest pressure, BP 100/50, P. 100 (and irregular). His chest pressure has become more intense and no longer responds to nitroglycerin. What tests will you order to evaluate his status and monitor your treatment?



ACUTE MYOCARDIAL INFARCTION

STABLE

DIAGNOSTIC PATTERNS OF CARE (DPC) - SURVEY FORM

(1) VAMC STATION NUMBER: _____ (2.) MEDICAL SCHOOL AFFILIATION_____ 113.1015

(3.) SPECIALTY _____ (4.) YEARS IN SPECIALTY _____

(5.) DRG (122) CIRCULATORY DISORDERS W AMI & C.V. COMP. DISCH. ALIVE

(6.) PRINCIPAL DIAGNOSIS: 24100-4109

(7.) PATIENT STATUS: STABLE

(7.A) Dx: ACUTE MYOCARDIAL INFARCTION

CASE STUDY #122-2: A 66-year-old man is brought to the emergency room complaining of intense, retrosternal pain, which radiates to the left shoulder and arm, of approximately an hour's duration. There has been no vomiting or sweating. On physical exam the pulse is 90 with a rare (less than one per minute) irregular beat. There are no signs of congestive heart failure. What tests and procedures will you order to substantiate your clinical impression of acute myocardial infarction? What tests will you order to monitor your therapy?

LEGEND OF CODES

Code	VALUE OF TEST	Code	FREQUENCY OF TESTS
1.	Highly necessary	1.	Once daily for one day only
2.	Moderately necessary	2.	Once daily for 2-3 days
3.	Somewhat necessary	3.	Once daily for 3-5 days
4.	Not necessary	4.	Once daily for >5 days
		5.	Other (enter own freq/days)
		6.	P.R.N. only
		7.	Once only on admission

DIRECTIONS: Fill in the sections below (8-10-11-12) based on the diagnosis in (7.A) above.

(8.) DIAGNOSTIC TEST(S) NEEDED (Do NOT use profile or instrument names for lab tests)	(9.) PURPOSE OF TEST	(10.) VALUE OF TEST CODE	(11.) FREQUENCY CODE	(12.) PHYSICIAN'S DRUG THERAPY Your Drug(s) of Choice Write in your drug(s) of Choice
1. _____		_____	_____	1. _____
2. _____		_____	_____	2. _____
3. _____		_____	_____	3. _____
4. _____	SCREENING	_____	_____	4. _____
5. _____	ADMISSION	_____	_____	5. _____
6. _____	STABLE	_____	_____	6. _____
7. _____	ONLY	_____	_____	7. _____
8. _____	(DO	_____	_____	8. _____
9. _____	NOT	_____	_____	9. _____
10. _____	ENTER	_____	_____	10. _____
11. _____	DATA	_____	_____	11. _____
12. _____	IN THIS	_____	_____	12. _____
13. _____	COLUMN)	_____	_____	13. _____
14. _____		_____	_____	14. _____
15. _____		_____	_____	15. _____

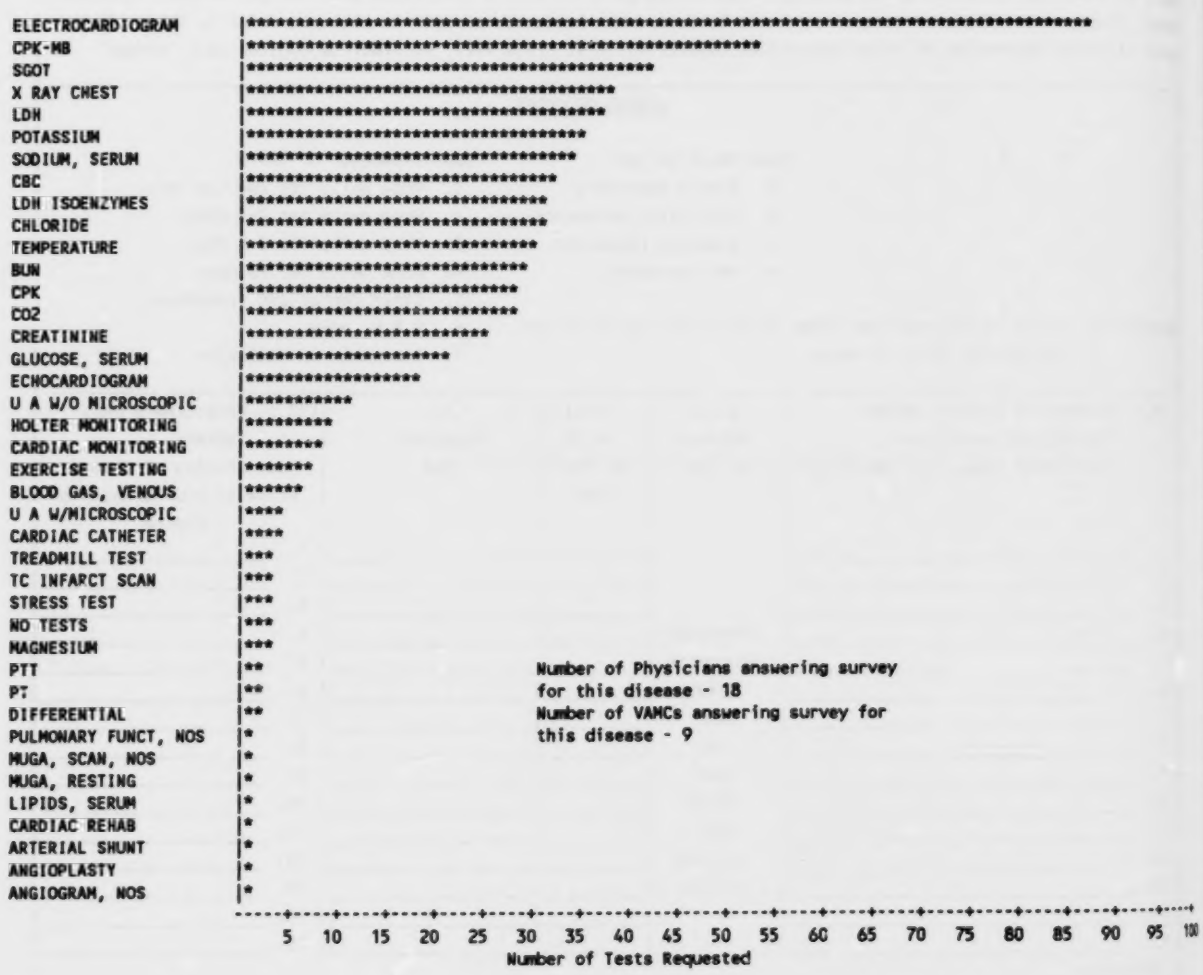
COMMENTS:

Revised 9/84 EMT/MCC

TESTS STABLE

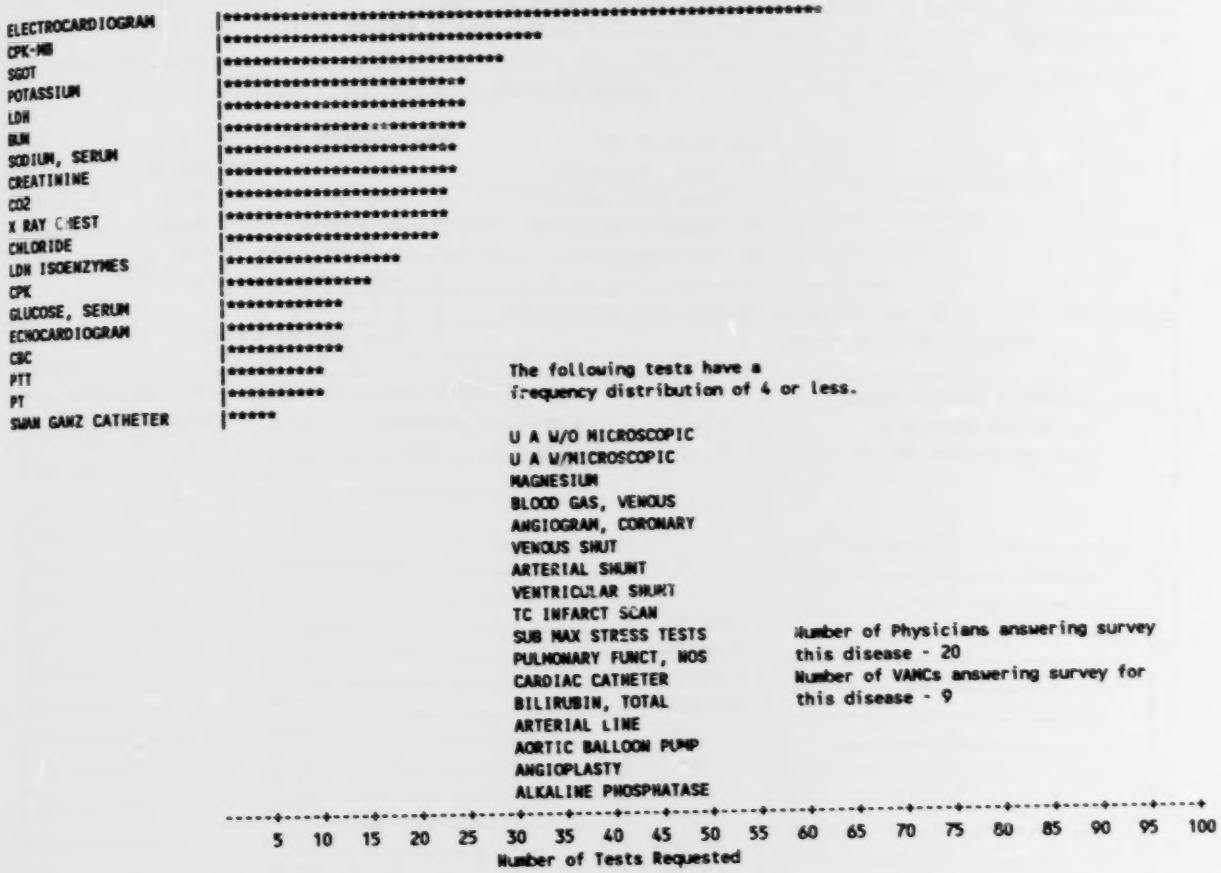
CIRCULATORY DISORDER WITH AMI & C.V. COMP. DISCH. ALIVE
PRIMARY DIAGNOSIS - ACUTE MYOCARDIAL INFARCTION
NATIONWIDE HISTOGRAM
PATIENT'S CONDITION - STABLE
1986 - 1989

CASE STUDY: A 66-year-old man is brought to the emergency room complaining of intense, retrosternal pain, which radiates to the left shoulder and arm, of approximately an hour's duration. There has been no vomiting or sweating. On physical exam the pulse is 90 with a rare (less than one per minute) irregular beat. There are no signs of congestive heart failure. What tests and procedures will you order to substantiate your clinical impression of acute myocardial infarction? What tests will you order to monitor your therapy?



CIRCULATORY DISORDER WITH AMI & C.V. COMP. DISCH. ALIVE
PRIMARY DIAGNOSIS - ACUTE MYOCARDIAL INFARCTION
NATIONWIDE HISTOGRAM
PATIENT'S CONDITION - UNSTABLE
1986 - 1989

CASE STUDY: A 66-year-old man was brought to the emergency room 12 hours ago complaining of intense retrosternal pain, which radiated to the left shoulder and arm, of approximately an hour's duration. There has been some vomiting and sweating. On physical exam the pulse is 90 with a rare (less than one per minute) irregular beat. There were no signs of congestive heart failure. Initial screening test showed a mild leucocytosis. His status is unstable. What tests and procedures will you order to confirm your diagnosis of acute myocardial infarction? What tests will you order to monitor your treatment?



UNSTABLE

DIAGNOSTIC PATTERNS OF CARE (PDC) - SURVEY FORM

(1) VAMC STATION NUMBER: _____ (2.) MEDICAL SCHOOL AFFILIATION_____ 113.1019

(3.) SPECIALTY _____ (4.) YEARS IN SPECIALTY _____

(5.) DRG (122) CIRCULATORY DISORDERS W AMI & C.V. COMP. DISCH. ALIVE

(6.) PRINCIPAL DIAGNOSIS: 24100-4109

(7.) PATIENT STATUS: UNSTABLE

(7.A) Dx: ACUTE MYOCARDIAL INFARCTION

CASE STUDY #122-6: A 66-year-old man was brought to the emergency room 12 hours ago complaining of intense retrosternal pain, which radiated to the left shoulder and arm, of approximately an hour's duration. There has been some vomiting and sweating. On physical exam the pulse is 90 with a rare (less than one per minute) irregular beat. There were no signs of congestive heart failure. Initial screening test showed a mild leucocytosis. His status is unstable. What tests and procedures will you order to confirm your diagnosis of acute myocardial infarction? What tests will you order to monitor your treatment?

LEGEND OF CODES

Code VALUE OF TEST
1. Highly necessary
2. Moderately necessary
3. Somewhat necessary
4. Not necessary

Code FREQUENCY OF TESTS
1. Once daily for one day only
2. Once daily for 2-3 days
3. Once daily for 3-5 days
4. Once daily for >5 days
5. Other (enter own freq/days)
6. P.R.N. only
7. Once only on admission

DIRECTIONS: Fill in the sections below (8-10-11-12) based on the diagnosis in (7.A) above.

(8.) DIAGNOSTIC TEST(S) NEEDED (Do NOT use profile or instrument names for lab tests)	(9.) PURPOSE OF TEST	(10.) VALUE OF TEST CODE	(11.) FREQUENCY CODE	(12.) PHYSICIAN'S DRUG THERAPY Your Drug(s) of Choice Write in your drug(s) of Choice
1. _____				1. _____
2. _____				2. _____
3. _____				3. _____
4. _____	CONFIRM			4. _____
5. _____	PRINCIPAL			5. _____
6. _____	DIAGNOSIS			6. _____
7. _____	UNSTABLE			7. _____
8. _____	(DO			8. _____
9. _____	NOT			9. _____
10. _____	ENTER			10. _____
11. _____	DATA			11. _____
12. _____	IN THIS			12. _____
13. _____	COLUMN)			13. _____
14. _____				14. _____
15. _____				15. _____

COMMENTS:

Revised 9/84 EMT/MCC

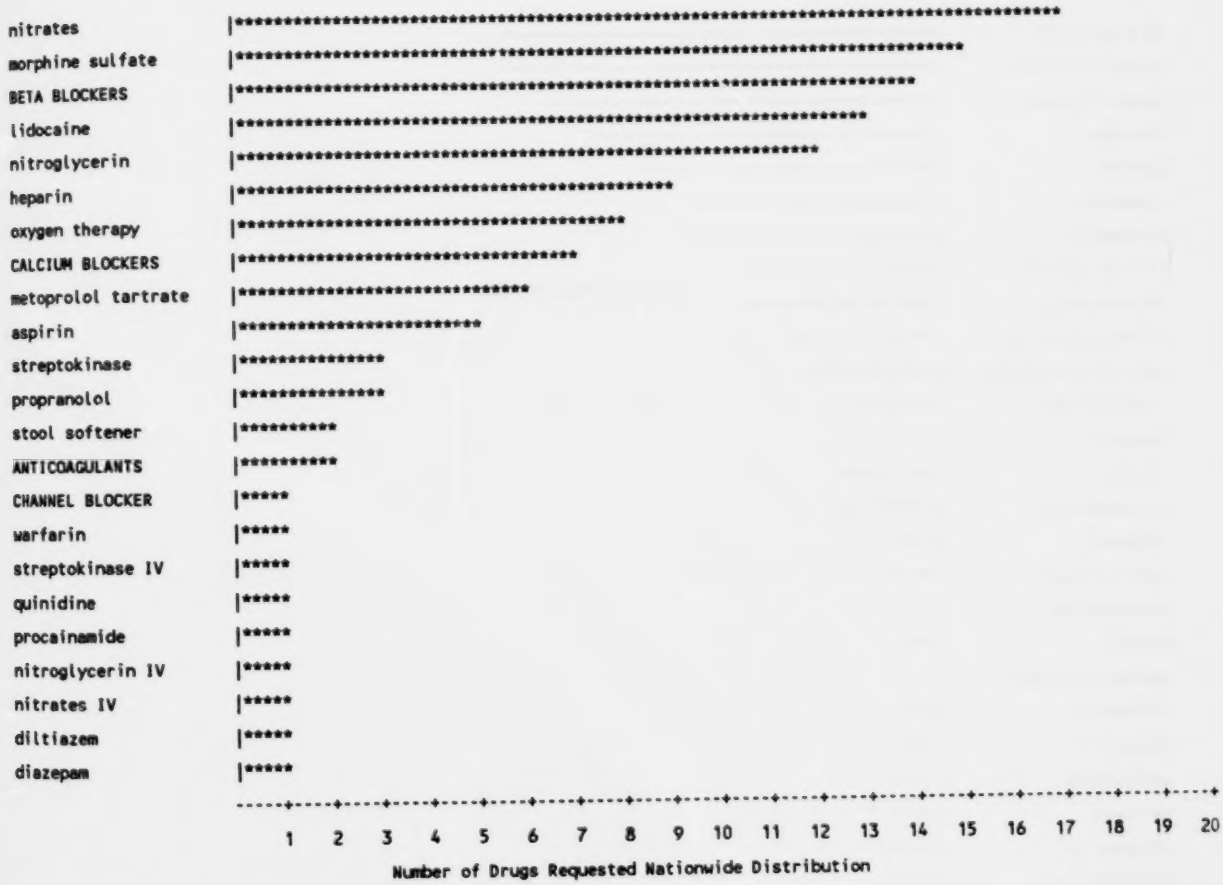
CIRCULATORY DISORDER WITH AMI & C.V. COMP. DISCH. ALIVE

PRIMARY DIAGNOSIS - ACUTE MYOCARDIAL INFARCTION

NATIONWIDE HISTOGRAM FOR DRUGS

PATIENT'S CONDITION - STABLE

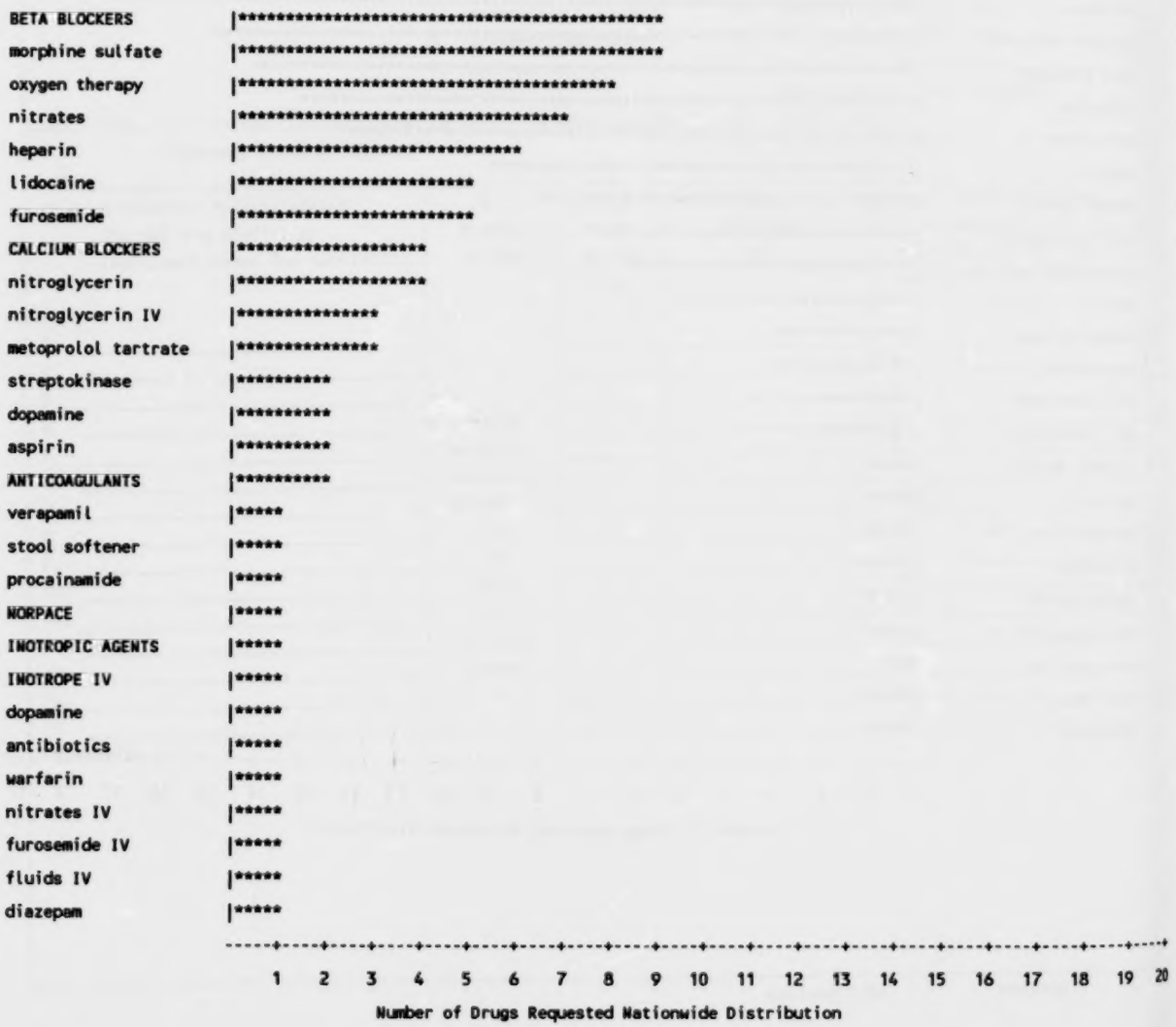
CASE STUDY: A 66-year-old man is brought to the emergency room complaining of intense, retrosternal pain, which radiates to the left shoulder and arm, of approximately an hour's duration. There has been no vomiting or sweating. On physical exam the pulse is 90 with a rare (less than one per minute) irregular beat. There are no signs of congestive heart failure. What tests and procedures will you order to substantiate your clinical impression of acute myocardial infarction? What tests will you order to monitor your therapy?



UNSTABLE

CIRCULATORY DISORDER WITH AMI & C.V. COMP. DISCH. ALIVE
PRIMARY DIAGNOSIS - ACUTE MYOCARDIAL INFARCTION
NATIONWIDE DISTRIBUTION FOR DRUGS
PATIENT'S CONDITION - UNSTABLE

CASE STUDY: A 66-year-old man was brought to the emergency room 12 hours ago complaining of intense retrosternal pain, which radiated to the left shoulder and arm, of approximately an hour's duration. There has been some vomiting and sweating. On physical exam the pulse is 90 with a rare (less than one per minute) irregular beat. There were no signs of congestive heart failure. Initial screening test showed a mild leucocytosis. His status is unstable. What tests and procedures will you order to confirm your diagnosis of acute myocardial infarction? What tests will you order to monitor your treatment?



GASTROENTERITIS

DIAGNOSTIC PATTERNS OF CARE (DPC) - SURVEY FORM

(1) VAMC STATION NUMBER: _____ (2.) MEDICAL SCHOOL AFFILIATION_____ 113.1700

(3.) SPECIALTY _____ (4.) YEARS IN SPECIALTY _____

(5.) DRG (183) ESOPHAGITIS, GASTROENT. & MISC. DIGEST. DIS AGE 18-69 W/O CC

(6.) PRINCIPAL DIAGNOSIS: 00849; 0085

(7.) PATIENT STATUS: STABLE

(7.A) Dx: GASTROENTERITIS

CASE STUDY #183-1: A 30-year-old farmer is seen in the emergency room complaining of abdominal cramps, diarrhea, and fever of 2 days' duration. Two other family members have a similar illness. The patient lives on a farm where poultry and cattle are raised; he has not traveled recently. Two weeks ago the family dog gave birth to a litter of pups some of which now have diarrhea. Drinking water on the farm is provided by a well. Examination of the patient reveals a temp of 100.0F and some mild lower abdominal tenderness. What tests and procedures will you order to screen this patient to determine if he should be admitted?

LEGEND OF CODES

Code	VALUE OF TEST
1.	Highly necessary
2.	Moderately necessary
3.	Somewhat necessary
4.	Not necessary

Code	FREQUENCY OF TESTS
1.	Once daily for one day only
2.	Once daily for 2-3 days
3.	Once daily for 3-5 days
4.	Once daily for >5 days
5.	Other (enter own freq/days)
6.	P.R.N. only
7.	Once only on admission

DIRECTIONS: Fill in the sections below (8-10-11-12) based on the diagnosis in (7.A) above.

(8.) DIAGNOSTIC TEST(S) NEEDED (Do NOT use profile or instrument names for lab tests)	(9.) PURPOSE OF TEST	(10.) VALUE OF TEST CODE	(11.) FREQUENCY CODE	(12.) PHYSICIAN'S DRUG THERAPY Your Drug(s) of Choice Write in your drug(s) of Choice
1. _____		_____	_____	1. _____
2. _____		_____	_____	2. _____
3. _____		_____	_____	3. _____
4. _____	ADMISSION	_____	_____	4. _____
5. _____	STABLE	_____	_____	5. _____
6. _____		_____	_____	6. _____
7. _____		_____	_____	7. _____
8. _____	(DO	_____	_____	8. _____
9. _____	NOT	_____	_____	9. _____
10. _____	ENTER	_____	_____	10. _____
11. _____	DATA	_____	_____	11. _____
12. _____	IN THIS	_____	_____	12. _____
13. _____	COLUMN)	_____	_____	13. _____
14. _____		_____	_____	14. _____
15. _____	_____	_____	_____	15. _____

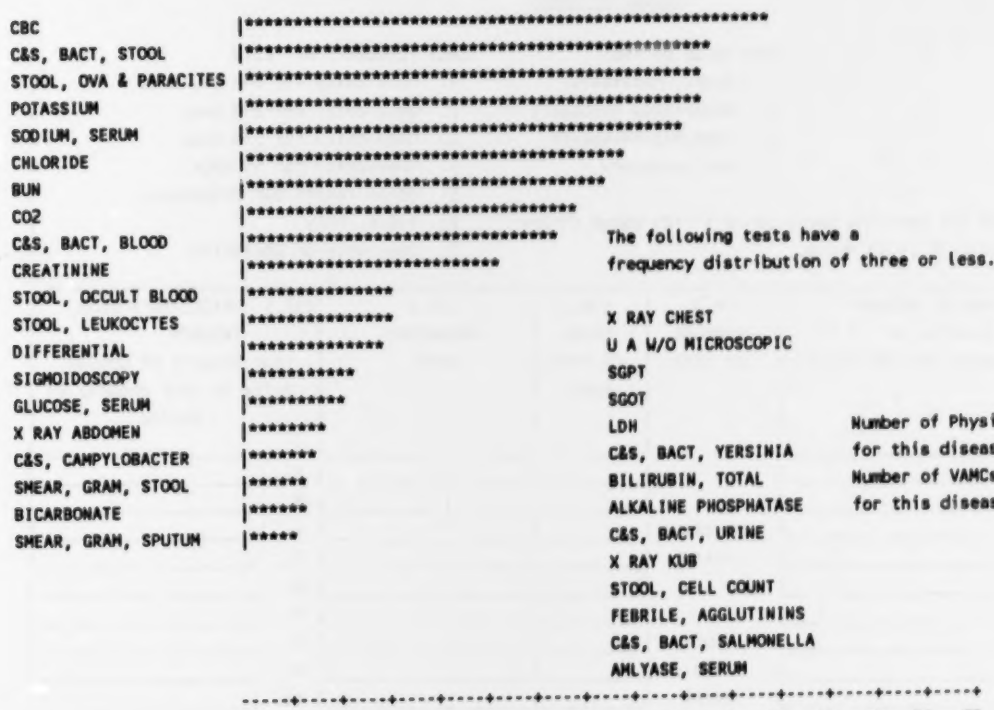
COMMENTS:

Revised 9/84 EMT/MCC

TESTS STABLE

ESOPHAGITIS, GASTROENTERITIS AND MISCELLANEOUS DIGESTIVE
DISORDER AGE 18-69 W/O C.C.
PRIMARY DIAGNOSIS = GASTROENTERITIS
NATIONWIDE HISTOGRAM
PATIENT'S CONDITION - STABLE
1986 - 1989

CASE STUDY: A 30-year-old farmer is seen in the emergency room complaining of abdominal cramps, diarrhea, and fever of 2 days' duration. Two other family members have a similar illness. The patient lives on a farm where poultry and cattle are raised; he has not traveled recently. Two weeks ago the family dog gave birth to a litter of pups some of which now have diarrhea. Drinking water on the farm is provided by a well. Examination of the patient reveals a temp of 100.0F and some mild lower abdominal tenderness. What tests and procedures will you order to screen this patient to determine if he should be admitted?



*Represents the frequency of tests requested based on range of choices listed on DPC survey form (reverse side).

ESOPHAGITIS, GASTROENTERITIS AND MISCELLANEOUS DIGESTIVE
DISORDERS AGE 18-69 W/O C.C.
PRIMARY DIAGNOSIS - GASTROENTERITIS
NATIONWIDE HISTOGRAM
PATIENT'S CONDITION - UNSTABLE
1986 - 1989

CASE STUDY: A 30-year-old farmer was seen four days ago in the emergency room for evaluation of severe abdominal cramps, diarrhea, and fever of 2 days' duration. Two other family members have a similar illness. The patient lives on a farm where poultry and cattle are raised; he has not traveled recently. Two weeks ago the family dog gave birth to a litter of pups, some of which now have diarrhea. Drinking water on the farm is provided by a well. Exam of the patient revealed a temperature of 104.5 F and diffuse lower abdominal tenderness. His shaking chills and confused sensorium have continued despite your therapy. His blood pressure remains at 90/50. What tests and procedures will you order to monitor his progress?

*Represents the frequency of tests requested based on range of choices listed on DPC survey form (reverse side).

DIAGNOSTIC PATTERNS OF CARE (DPC) - SURVEY FORM

(1) VAHC STATION NUMBER: _____ (2.) MEDICAL SCHOOL AFFILIATION_____ 113.1703

(3.) SPECIALTY _____ (4.) YEARS IN SPECIALTY _____

(5.) DRG (183) ESOPHAGITIS, GASTROENT. & MISC. DIGEST. DIS AGE 18-69 W/O CC

(6.) PRINCIPAL DIAGNOSIS: 00849; 0085

(7.) PATIENT STATUS: UNSTABLE

(7.A) Dx: GASTROENTERITIS

CASE STUDY #183-5: A 30-year-old farmer was seen four days ago in the emergency room for evaluation of severe abdominal cramps, diarrhea, and fever of 2 days' duration. Two other family members have a similar illness. The patient lives on a farm where poultry and cattle are raised; he has not traveled recently. Two weeks ago the family dog gave birth to a litter of pups, some of which now have diarrhea. Drinking water on the farm is provided by a well. Exam of the patient revealed a temperature of 104.5 F and diffuse lower abdominal tenderness. His shaking chills and confused sensorium have continued despite your therapy. His blood pressure remains at 90/50. What tests and procedures will you order to monitor his progress?

LEGEND OF CODES

Code VALUE OF TEST
1. Highly necessary
2. Moderately necessary
3. Somewhat necessary
4. Not necessary

Code FREQUENCY OF TESTS
1. Once daily for one day only
2. Once daily for 2-3 days
3. Once daily for 3-5 days
4. Once daily for >5 days
5. Other (enter own freq/days)
6. P.R.N. only
7. Once only on admission

DIRECTIONS: Fill in the sections below (8-10-11-12) based on the diagnosis in (7.A) above.

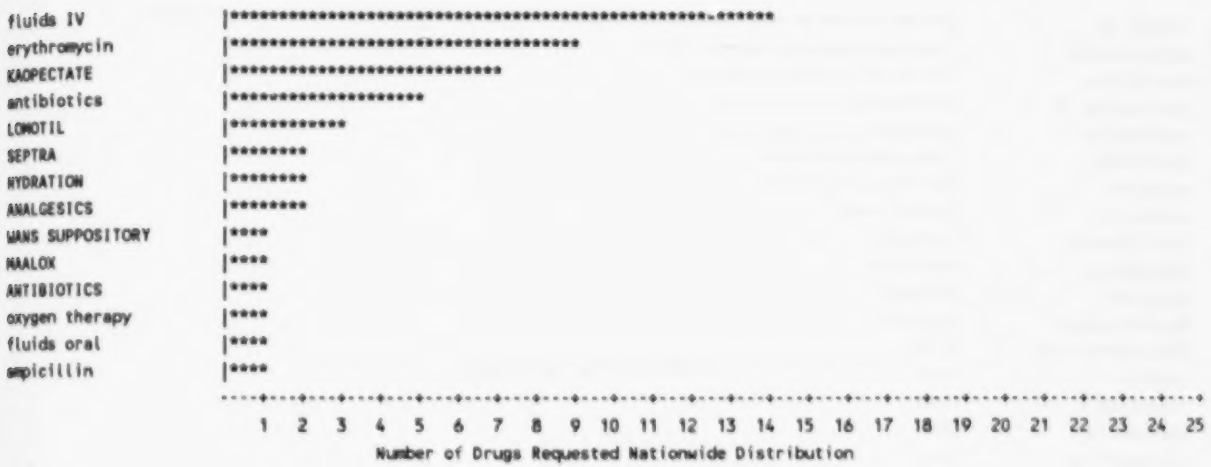
(8.) DIAGNOSTIC TEST(S) NEEDED (Do NOT use profile or instrument names for lab tests)	(9.) PURPOSE OF TEST	(10.) VALUE OF TEST CODE	(11.) FREQUENCY CODE	(12.) PHYSICIAN'S DRUG THERAPY Your Drug(s) of Choice Write in your drug(s) of Choice
1.				1.
2.				2.
3.				3.
4.	MONITOR			4.
5.	UNSTABLE			5.
6.				6.
7.				7.
8.	(DO			8.
9.	NOT			9.
10.	ENTER			10.
11.	DATA			11.
12.	IN THIS			12.
13.	COLUMN)			13.
14.				14.
15.				15.

COMMENTS:

Revised 9/84 EMT/MCC

ESOPHAGITIS, GASTROENTERITIS AND MISCELLANEOUS DIGESTIVE
DISORDER AGE 18-69 W/O C.C.
PRIMARY DIAGNOSIS - GASTROENTERITIS
NATIONWIDE HISTOGRAM FOR DRUGS
PATIENT'S CONDITION - STABLE

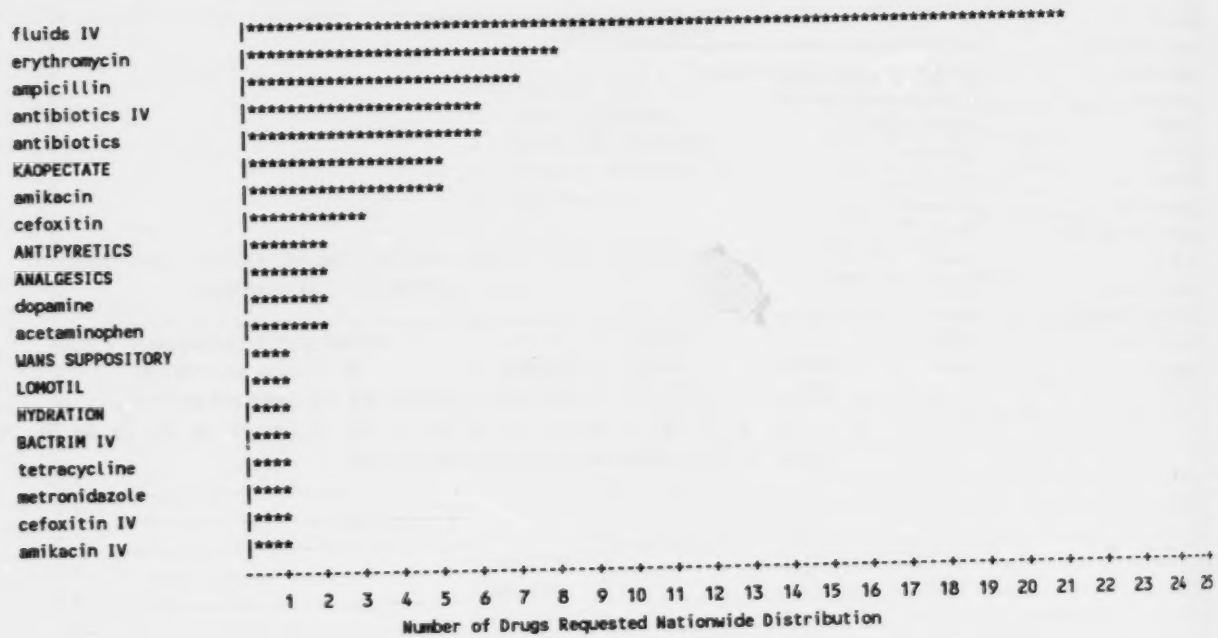
CASE STUDY: A 30-year-old farmer is seen in the emergency room complaining of abdominal cramps, diarrhea, and fever of 2 days' duration. Two other family members have a similar illness. The patient lives on a farm where poultry and cattle are raised; he has not traveled recently. Two weeks ago the family dog gave birth to a litter of pups some of which now have diarrhea. Drinking water on the farm is provided by a well. Examination of the patient reveals a temp of 100.0F and some mild lower abdominal tenderness. What tests and procedures will you order to screen this patient to determine if he should be admitted?



UNSTABLE

ESOPHAGITIS, GASTROENTERITIS AND MISCELLANEOUS DIGESTIVE
DISORDERS AGE 18-69 W/O C.C.
PRIMARY DIAGNOSIS - GASTROENTERITIS
NATIONWIDE HISTOGRAM FOR DRUGS
PATIENT'S CONDITION - UNSTABLE

CASE STUDY: A 30-year-old farmer was seen four days ago in the emergency room for evaluation of severe abdominal cramps, diarrhea, and fever of 2 days' duration. Two other family members have a similar illness. The patient lives on a farm where poultry and cattle are raised; he has not traveled recently. Two weeks ago the family dog gave birth to a litter of pups, some of which now have diarrhea. Drinking water on the farm is provided by a well. Exam of the patient revealed a temperature of 104.5 F and diffuse lower abdominal



ALCOHOL DEPENDENCE

STABLE

DIAGNOSTIC PATTERNS OF CARE (DPC) - SURVEY FORM

(1) VAMC STATION NUMBER: _____ (2.) MEDICAL SCHOOL AFFILIATION_____ 113.1720

(3.) SPECIALTY _____ (4.) YEARS IN SPECIALTY _____

(5.) DRG (436) ALCOHOL DEPENDENCE

(6.) PRINCIPAL DIAGNOSIS: 30391-93

(7.) PATIENT STATUS: STABLE

(7.A) Dx: ALCOHOL DEPENDENCE

CASE STUDY #436-1: A 58-year-old caucasian male is admitted to the emergency room complaining of nausea, vomiting and weight loss of ten pounds in the past month. He admits to intake of at least one pint of bourbon daily for the past two years. Physical examination reveals ascites, icterus and pedal edema. His condition is stable. What screening tests will you order to substantiate your clinical impression of alcohol dependence? What tests will you order to monitor your therapy?

LEGEND OF CODES

Code	VALUE OF TEST	Code	FREQUENCY OF TESTS
1.	Highly necessary	1.	Once daily for one day only
2.	Moderately necessary	2.	Once daily for 2-3 days
3.	Somewhat necessary	3.	Once daily for 3-5 days
4.	Not necessary	4.	Once daily for >5 days
		5.	Other (enter own freq/days)
		6.	P.R.N. only
		7.	Once only on admission

DIRECTIONS: Fill in the sections below (8-10-11-12) based on the diagnosis in (7.A) above.

(8.) DIAGNOSTIC TEST(S) NEEDED (Do NOT use profile or instrument names for lab tests)	(9.) PURPOSE OF TEST	(10.) VALUE OF TEST CODE	(11.) FREQUENCY CODE	(12.) PHYSICIAN'S DRUG THERAPY Your Drug(s) of Choice Write in your drug(s) of Choice
1. _____		_____	_____	1. _____
2. _____		_____	_____	2. _____
3. _____		_____	_____	3. _____
4. _____	ADMIT	_____	_____	4. _____
5. _____	STABLE	_____	_____	5. _____
6. _____		_____	_____	6. _____
7. _____		_____	_____	7. _____
8. _____	(DO	_____	_____	8. _____
9. _____	NOT	_____	_____	9. _____
10. _____	ENTER	_____	_____	10. _____
11. _____	DATA	_____	_____	11. _____
12. _____	IN THIS	_____	_____	12. _____
13. _____	COLUMN)	_____	_____	13. _____
14. _____		_____	_____	14. _____
15. _____		_____	_____	15. _____

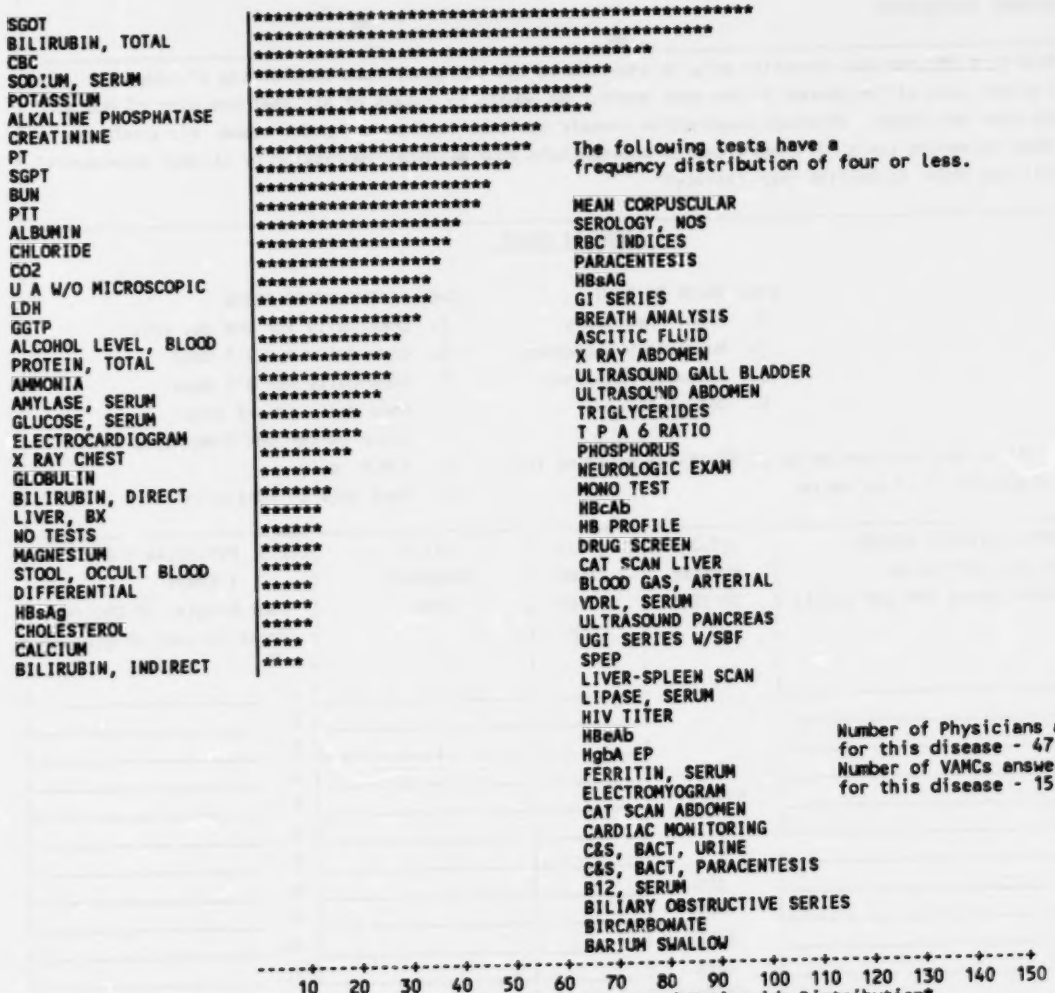
COMMENTS:

Revised 9/84 ENT/MCC

TESTS STABLE

ALCOHOL DEPENDENCE
PRIMARY DIAGNOSIS - ALCOHOL DEPENDENCE
NATIONWIDE HISTOGRAM
PATIENT'S CONDITION - STABLE
1986 - 1989

CASE STUDY: A 58-year-old caucasian male is admitted to the emergency room complaining of nausea, vomiting and weight loss of ten pounds in the past month. He admits to intake of at least one pint of bourbon daily for the past two years. Physical examination reveals ascites, icterus and pedal edema. His condition is stable. What screening tests will you order to substantiate your clinical impression of alcohol dependence?



Number of Physicians answering survey for this disease - 47
Number of VAMCs answering survey for this disease - 15

*Represents the frequency of tests requested based on range of choices listed on DPC survey form (reverse side).

ALCOHOL DEPENDENCE
PRIMARY DIAGNOSIS - ALOCHOL DEPENDENCE
NATIONWIDE HISTOGRAM
PATIENT'S CONDITION - UNSTABLE
1986 - 1989

CASE STUDY: A 58-year-old caucasian male was admitted 48 hours ago to the emergency room complaining of nausea, vomiting and weight loss of ten pounds in the past month. He admitted to intake of at least one pint of bourbon daily for the past two years. Physical exam revealed ascites, icterus and pedal edema. His condition deteriorated yesterday and he became febrile (102.5 F), semi-comatose and hypotensive (90/50). You have aggressively treated him but he is not responding. What tests/procedures will you order to monitor your therapy and his progress?

Number of Physicians answering survey for this disease - 36
Number of VAMCs answering survey for this disease - 15

*Represents the frequency of tests requested based on range of choices listed on DPC survey form (reverse side)

UNSTABLE

DIAGNOSTIC PATTERNS OF CARE (DPC) - SURVEY FORM

(1) VAMC STATION NUMBER: _____ (2.) MEDICAL SCHOOL AFFILIATION_____ 113.6006

(3.) SPECIALTY _____ (4.) YEARS IN SPECIALTY _____

(5.) DRG (436) ALCOHOL DEPENDENCE

(6.) PRINCIPAL DIAGNOSIS: 30391-93

(7.) PATIENT STATUS: UNSTABLE

(7.A) Dx: ALCOHOL DEPENDENCE

CASE STUDY #436-6: A 58-year-old caucasian male was admitted 48 hours ago to the emergency room complaining of nausea, vomiting and weight loss of ten pounds in the past month. He admitted to intake of at least one pint of bourbon daily for the past two years. Physical exam revealed ascites, icterus and pedal edema. His condition deteriorated yesterday and he became febrile (102.5 F), semi-comatose and hypotensive (90/50). You have aggressively treated him but he is not responding. What tests/procedures will you order to monitor your therapy and his progress?

LEGEND OF CODES

Code VALUE OF TEST
1. Highly necessary
2. Moderately necessary
3. Somewhat necessary
4. Not necessary

Code FREQUENCY OF TESTS
1. Once daily for one day only
2. Once daily for 2-3 days
3. Once daily for 3-5 days
4. Once daily for >5 days
5. Other (enter own freq/days)
6. P.R.N. only
7. Once only on admission

DIRECTIONS: Fill in the sections below (8-10-11-12) based on the diagnosis in (7.A) above.

(8.) DIAGNOSTIC TEST(S) NEEDED (Do NOT use profile or instrument names for lab tests)	(9.) PURPOSE OF TEST	(10.) VALUE OF TEST CODE	(11.) FREQUENCY CODE	(12.) PHYSICIAN'S DRUG THERAPY Your Drug(s) of Choice Write in your drug(s) of Choice
1.	MONITOR UNSTABLE (DO NOT ENTER DATA IN THIS COLUMN)			1.
2.				2.
3.				3.
4.				4.
5.				5.
6.				6.
7.				7.
8.				8.
9.				9.
10.				10.
11.				11.
12.				12.
13.				13.
14.				14.
15.				15.

COMMENTS:

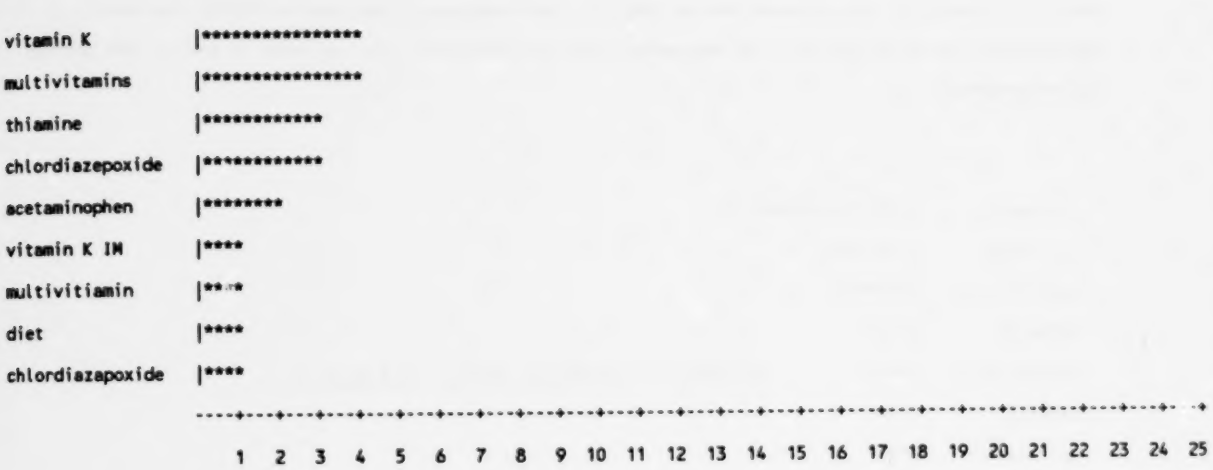
Revised 9/84 EMT/MCC

ALCOHOL DEPENDENCE

NATIONWIDE HISTOGRAM FOR DRUGS

PATIENT'S CONDITION - STABLE

CASE STUDY: A 58-year-old caucasian male is admitted to the emergency room complaining of nausea, vomiting and weight loss of ten pounds in the past month. He admits to intake of at least one pint of bourbon daily for the past two years. Physical examination reveals ascites, icterus and pedal edema. His condition is stable. What screening tests will you order to substantiate your clinical impression of alcohol dependence?



Number of Drugs Requested Nationwide Distribution

DRUGS UNSTABLE

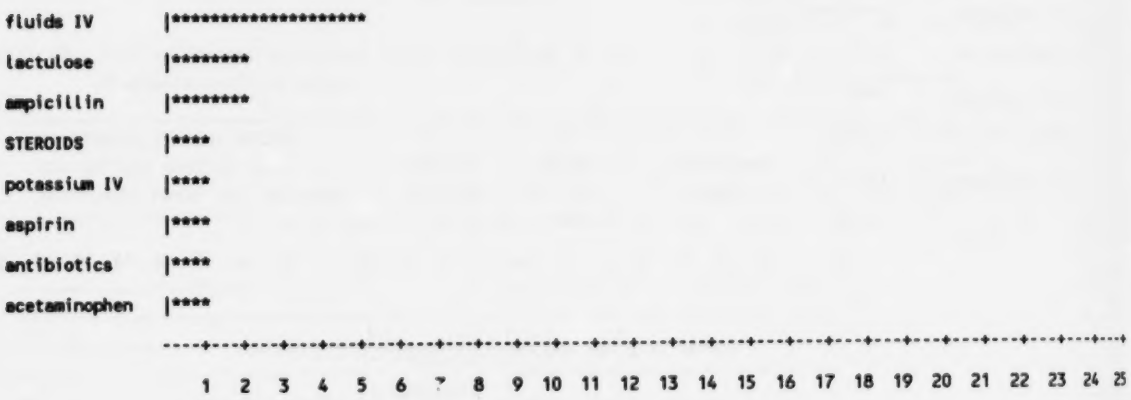
ALCOHOL DEPENDENCE

NATIONWIDE HISTOGRAM FOR DRUGS

PATIENT'S CONDITION - UNSTABLE

1986 - 1989

CASE STUDY: A 58-year-old caucasian male was admitted 48 hours ago to the emergency room complaining of nausea, vomiting and weight loss of ten pounds in the past month. He admitted to intake of at least one pint of bourbon daily for the past two years. Physical exam revealed ascites, icterus and pedal edema. His condition deteriorated yesterday and he became febrile (102.5 F), semi-comatose and hypotensive (90/50). You have aggressively treated him but he is not responding. What tests/procedures will you order to monitor your therapy and his progress?


fluids IV
lactulose
ampicillin
STEROIDS
potassium IV
aspirin
antibiotics
acetaminophen
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25
Number of Drugs Requested Nationwide Distribution

ALCOHOLIC LIVER DISEASE/CIRRHOSIS

STABLE

DIAGNOSTIC PATTERNS OF CARE (DPC) - SURVEY FORM

(1) VAMC STATION NUMBER: _____ (2.) MEDICAL SCHOOL AFFILIATION_____ 113.1102

(3.) SPECIALTY _____ (4.) YEARS IN SPECIALTY _____

(5.) DRG (202) CIRRHOSIS & ALCOHOLIC HEPATITIS

(6.) PRINCIPAL DIAGNOSIS: 5711-5716

(7.) PATIENT STATUS: STABLE

(7.A) Dx: ALCOHOLIC LIVER DISEASE/CIRRHOSIS

CASE STUDY #202-12: A 42-year-old man with chronic alcoholism is known to have cirrhosis. He was admitted two days ago for evaluation of abdominal pain, weight loss and increasing jaundice. He is afebrile and your physical examination reveals the presence of asterixsis and ascites. His BP is 140/80, P 100 and regular. What screening tests and procedures will you order to substantiate your clinical impression of alcoholic liver disease? Which medications and treatment will you order, and what tests will you choose to monitor your treatment?

LEGEND OF CODES

Code	VALUE OF TEST	Code	FREQUENCY OF TESTS
1.	Highly necessary	1.	Once daily for one day only
2.	Moderately necessary	2.	Once daily for 2-3 days
3.	Somewhat necessary	3.	Once daily for 3-5 days
4.	Not necessary	4.	Once daily for >5 days
		5.	Other (enter own freq/days)
		6.	P.R.N. only
		7.	Once only on admission

DIRECTIONS: Fill in the sections below (8-10-11-12) based on the diagnosis in (7.A) above.

(8.) DIAGNOSTIC TEST(S) NEEDED (Do NOT use profile or instrument names for lab tests)	(9.) PURPOSE OF TEST	(10.) VALUE OF TEST CODE	(11.) FREQUENCY CODE	(12.) PHYSICIAN'S DRUG THERAPY Your Drug(s) of Choice Write in your drug(s) of Choice
1.				1.
2.				2.
3.				3.
4.	ADMISSION			4.
5.	STABLE			5.
6.				6.
7.				7.
8.	(DO			8.
9.	NOT			9.
10.	ENTER			10.
11.	DATA			11.
12.	IN THIS			12.
13.	COLUMN)			13.
14.				14.
15.				15.

COMMENTS:

Revised 9/84 EMT/MCC

TESTS STABLE

CIRRHOSIS AND ALCOHOLIC HEPATITIS
PRIMARY DIAGNOSIS - ALCOHOLIC LIVER DISEASE/CIRRHOSIS
NATIONWIDE HISTOGRAM
PATIENT'S CONDITION - STABLE
1986 - 1989

CASE STUDY: A 42-year-old man with chronic alcoholism is known to have cirrhosis. He was admitted two days ago for evaluation of abdominal pain, weight loss and increasing jaundice. He is afebrile and your physical examination reveals the presence of asterixsis and ascites. His BP is 140/80, P 100 and regular. What screening tests and procedures will you order to substantiate your clinical impression of alcoholic liver disease? Which medications and treatment will you order, and what tests will you choose to monitor your treatment?

BILIRUBIN, TOTAL	**********
SGOT	**********
ALKALINE PHOSPHA	**********
CBC	**********
SODIUM, SERUM	**********
PT	**********
VITAL SIGNS	**********
ALBUMIN	**********
CREATININE	**********
BUN	**********
POTASSIUM	**********
CHLORIDE	**********
CO2	**********
SGPT	**********
GLUCOSE, SERUM	**********
PTT	**********
AMYLASE, SERUM	**********
STOOL, OCCULT BLOOD	**********
C&S, BACT, BLOOD	**********
PARACENTESIS	**********
AMMONIA	**********
PHOSPHORUS	**********
MAGNESIUM	**********
CAT SCAN LIVER	**********
BILIRUBIN, DIRECT	**********
BICARBONATE	**********
X RAY CHEST	**********
UTLRASOUND ABDOMEN	**********
U A W/O MICROSCOPIC	**********
GGTP	**********
CAT SCAN ABDOMEN	**********

The following tests have a frequency distribution of four or less.

ALPHA-FETROPROTEIN
DIFFERENTIAL
CELL COUNT
X RAY ABDOMEN
PLEUROCENTESIS
NO TESTS
CAT SCAN SPELLN
UTLRASOUND LIVER
ULTRASOUND BILE DUCT
SMEAR, GRAM SPUTUM
RETICULOCYTE COUNT
PROTEIN, TOTAL
LIVER, BX
LDH
GLOBULIN
ELECTROLYTES URINE
ELECTROCARDIOGRAM
C&S, BACT, PARA FLUID
ULTRASOUND, NOS
ULTRASOUND PANCREAS
SONOGRAM, ABDOMEN
SMEAR, GRAM, NOS
PARACENTESIS, NOS
IgM
HBsAg
HBeAg
HBeAb
Hgb ELECTROPHORESIS
ENZYMES, NOS
CYTOLOGY, PARA FLUID
CHOLESTEROL
CALCIUM
C&S. BACT, URINE

Number of Physicians answering survey for this disease - 19
Number of VAMCs answering survey for this disease - 8

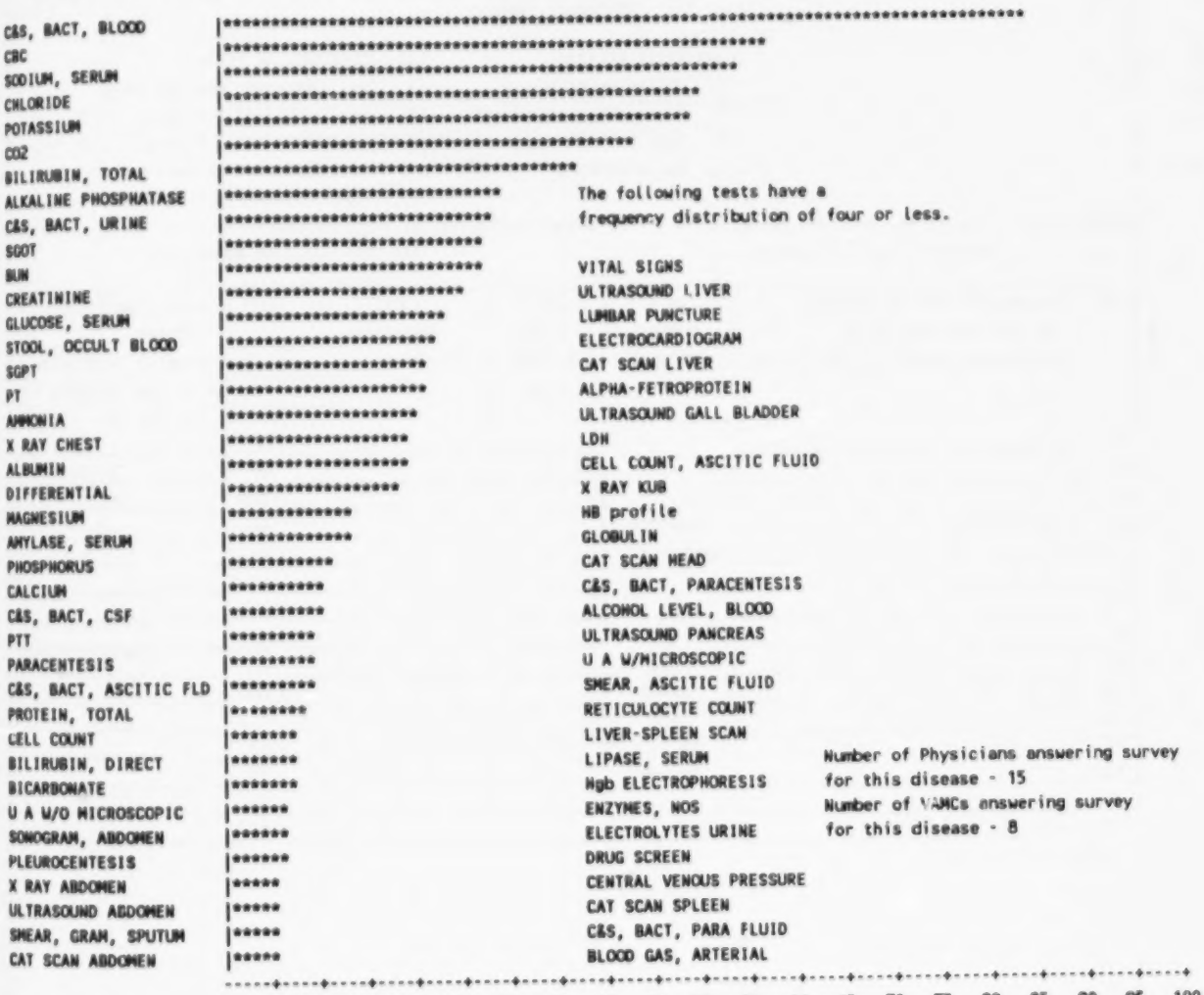
5 10 15 20 25 30 35 40 45 50 55 60 65 70 75 80 85 90 95 100

Number of Tests Requested Nationwide Distribution*

*Represents the frequency of tests requested based on range of choices listed on DPC survey form (reverse side).

CIRRHOSIS AND ALCOHOLIC HEPATITIS
PRIMARY DIAGNOSIS - ALCOHOLIC LIVER DISEASE/CIRRHOSIS
NATIONWIDE HISTOGRAM
PATIENT'S CONDITION - UNSTABLE
1986 - 1989

CASE STUDY: A 42-year-old man with chronic alcoholism is known to have cirrhosis. He was admitted two days ago for evaluation of abdominal pain, weight loss and increasing jaundice. You have determined that his abdominal pain and jaundice were caused by alcoholic hepatitis, by ordering appropriate diagnostic tests and procedures. His febrile episodes (102.6 to 105.4F), unstable blood pressure and vital signs give you concern about his prognosis, since he is responding poorly to your treatment regimen. Which tests, procedures and treatment will you order, and what tests will you choose to monitor your treatment?



Number of Physicians answering survey for this disease - 15
Number of VAMCs answering survey for this disease - 8

*Represents the frequency of tests requested based on range of choices listed on DPC survey form (reverse side).

UNSTABLE

DIAGNOSTIC PATTERNS OF CARE (DPC) - SURVEY FORM

(1) VANC STATION NUMBER: _____ (2.) MEDICAL SCHOOL AFFILIATION_____ 113.1106

(3.) SPECIALTY _____ (4.) YEARS IN SPECIALTY _____

(5.) DRG (202) CIRRHOSIS & ALCOHOLIC HEPATITIS

(6.) PRINCIPAL DIAGNOSIS: 5711-5716

(7.) PATIENT STATUS: UNSTABLE

(7.A) Dx: ALCOHOLIC LIVER DISEASE/CIRRHOSIS

CASE STUDY #202-16: A 42-year-old man with chronic alcoholism is known to have cirrhosis. He was admitted two days ago for evaluation of abdominal pain, weight loss and increasing jaundice. You have determined that his abdominal pain and jaundice were caused by alcoholic hepatitis, by ordering appropriate diagnostic tests and procedures. His febrile episodes (102.6 to 105.4F), unstable blood pressure and vital signs give you concern about his prognosis, since he is responding poorly to your treatment regimen. Which tests, procedures and treatment will you order, and what tests will you choose to monitor your treatment?

LEGEND OF CODES

Code VALUE OF TEST
1. Highly necessary
2. Moderately necessary
3. Somewhat necessary
4. Not necessary

Code FREQUENCY OF TESTS
1. Once daily for one day only
2. Once daily for 2-3 days
3. Once daily for 3-5 days
4. Once daily for >5 days
5. Other (enter own freq/days)
6. P.R.N. only
7. Once only on admission

DIRECTIONS: Fill in the sections below (8-10-11-12) based on the diagnosis in (7.A) above.

(8.) DIAGNOSTIC TEST(S) NEEDED (Do NOT use profile or instrument names for lab tests)	(9.) PURPOSE OF TEST	(10.) VALUE OF TEST CODE	(11.) FREQUENCY CODE	(12.) PHYSICIAN'S DRUG THERAPY Your Drug(s) of Choice Write in your drug(s) of Choice
1.	MONITOR UNSTABLE (DO NOT ENTER DATA IN THIS COLUMN)			1.
2.				2.
3.				3.
4.				4.
5.				5.
6.				6.
7.				7.
8.				8.
9.				9.
10.				10.
11.				11.
12.				12.
13.				13.
14.				14.
15.				15.

COMMENTS:

Revised 9/84 EMT/MCC

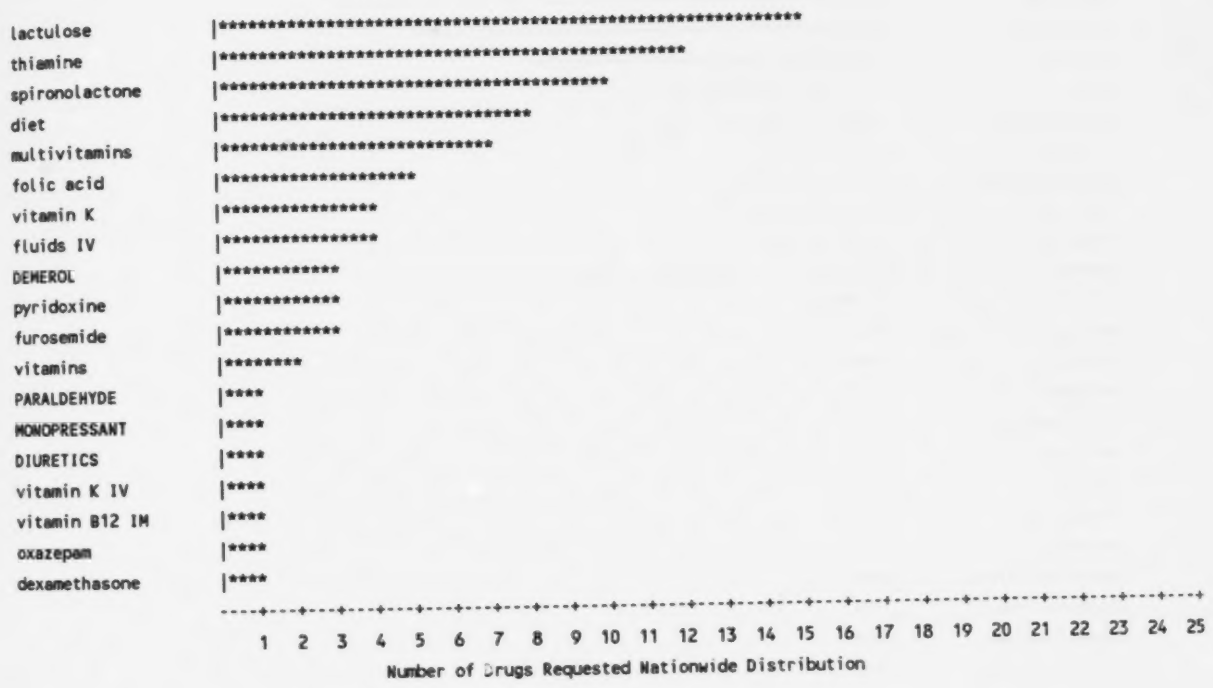
CIRRHOSIS AND ALCOHOLIC HEPATITIS

PRIMARY DIAGNOSIS - ALCOHOLIC LIVER DISEASE/CIRRHOSIS

NATIONWIDE HISTOGRAM FOR DRUGS

PATIENT'S CONDITION - STABLE

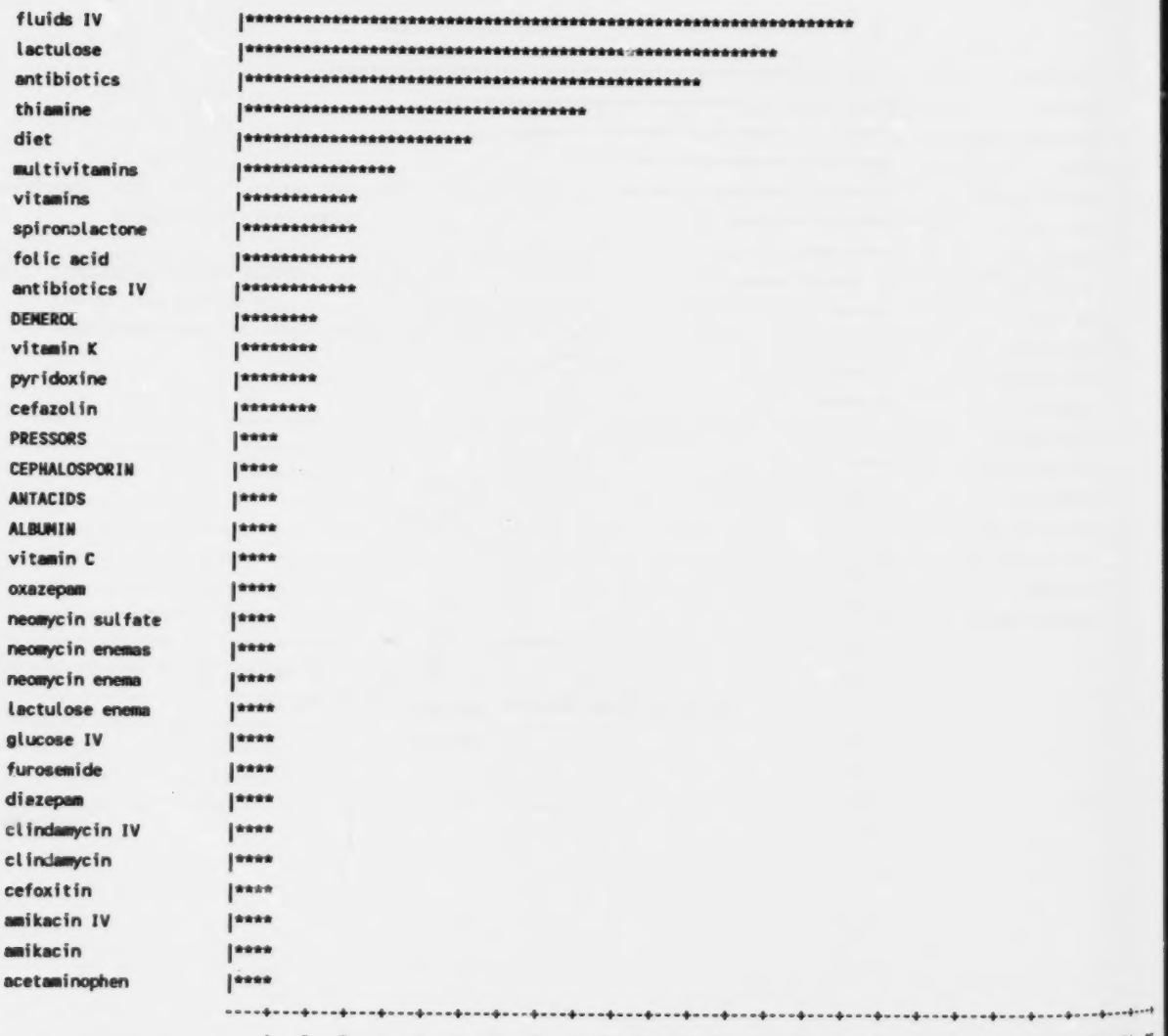
CASE STUDY: A 42-year-old man with chronic alcoholism is known to have cirrhosis. He was admitted two days ago for evaluation of abdominal pain, weight loss and increasing jaundice. He is afebrile and your physical examination reveals the presence of asterixsis and ascites. His BP is 140/80, P 100 and regular. What screening tests and procedures will you order to substantiate your clinical impression of alcoholic liver disease? Which medications and treatment will you order, and what tests will you choose to monitor your treatment?



DRUGS UNSTABLE

CIRRHOSIS AND ALCOHOLIC HEPATITIS
NATIONWIDE HISTOGRAM FOR DRUGS
PATIENT'S CONDITION - UNSTABLE

CASE STUDY: A 42-year-old man with chronic alcoholism is known to have cirrhosis. He was admitted two days ago for evaluation of abdominal pain, weight loss and increasing jaundice. You have determined that his abdominal pain and jaundice were caused by alcoholic hepatitis, by ordering appropriate diagnostic tests and procedures. His febrile episodes (102.6 to 105.4F), unstable blood pressure and vital signs give you concern about his prognosis, since he is responding poorly to your treatment regimen. Which tests, procedures and treatment will you order, and what tests will you choose to monitor your treatment?



ALCOHOLIC LIVER DISEASE

DIAGNOSTIC PATTERNS OF CARE (DPC) - SURVEY FORM

113.5001

(1) VANC STATION NUMBER: _____ (2.) MEDICAL SCHOOL AFFILIATION_____

(3.) SPECIALTY _____ (4.) YEARS IN SPECIALITY _____

(5.) DRG (200) HEPATOBILIARY DIAGNOSTIC PROCEDURE FOR NON-MALIGNANCY

(6.) PRINCIPAL DIAGNOSIS: 5710-13, 5715-19, 57140

(7.) PATIENT STATUS: STABLE

(7.A) Dx: ALCOHOLIC LIVER DISEASE

CASE STUDY #2003: A 39-year-old man has recently been suspended from work on condition that he seek help for "problem drinking." He consumes a pint of whiskey or more, per day, often starting to drink before work in the morning. On exam, there is an odor suggestive of alcohol. He is alert, and has no stigmata of hepatic impairment. What screening tests will you order to substantiate your clinical impression of Laennec's cirrhosis, R/O alcoholic hepatitis?

LEGEND OF CODES

Code VALUE OF TEST
1. Highly necessary
2. Moderately necessary
3. Somewhat necessary
4. Not necessary

Code FREQUENCY OF TESTS
1. Once daily for one day only
2. Once daily for 2-3 days
3. Once daily for 3-5 days
4. Once daily for >5 days
5. Other (enter own freq/days)
6. P.R.N. only
7. Once only on admission

DIRECTIONS: Fill in the sections below (8-10-11-12) based on the diagnosis in (7.A) above.

(8.) DIAGNOSTIC TEST(S) NEEDED (Do NOT use profile or instrument names for lab tests)	(9.) PURPOSE OF TEST	(10.) VALUE OF TEST CODE	(11.) FREQUENCY CODE	(12.) PHYSICIAN'S DRUG THERAPY Your Drug(s) of Choice Write in your drug(s) of Choice
1.				1.
2.				2.
3.				3.
4.	SCREENING			4.
5.	ADMISSION			5.
6.	ONLY			6.
7.	STABLE			7.
8.	(DO			8.
9.	NOT			9.
10.	ENTER			10.
11.	DATA			11.
12.	IN THIS			12.
13.	COLUMN)			13.
14.				14.
15.				15.

COMMENTS:

Revised 9/84 EMT/MCC

TESTS STABLE

HEPATOBILIARY DIAGNOSISTIC PROCEDURE FOR NON-MALIGNANCY
PRIMARY DIAGNOSIS - ALCOHOLIC LIVER DISEASE
NATIONWIDE HISTOGRAM
PATIENT'S CONDITION - STABLE
1986 - 1989

CASE STUDY: A 39-year-old man has recently been suspended from work on condition that he seek help for "problem drinking." He consumes a pint of whiskey or more, per day, often starting to drink before work in the morning. On exam, there is an odor suggestive of alcohol. He is alert, and has no stigmata of hepatic impairment. What screening tests will you order to substantiate your clinical impression of Laennec's cirrhosis, R/O alcoholic hepatitis?

The following tests have a frequency distribution of two or less.

BILIRUBIN, DIRECT
BLEEDING TIME
GLUCOSE, SERUM
GLOBULIN
URIC ACID
SPEP
MAGNESIUM
LIVER, BX
AMONIA
X RAY CHEST
TRIGLYCERIDES
SGPT
PROTEIN, TOTAL
PROTEIN, SERUM
LIVER-SPLEEN SCAN
LDH
IgM
HBcAb
CREATININE
CO2
CHOLESTEROL
CHLORIDE
CAT SCAN LIVER
C&S, BACT, PARACENTESIS
BUN

Number of Physicians answering survey for this disease - 7

Number of VAMCs answering survey for this disease - 3

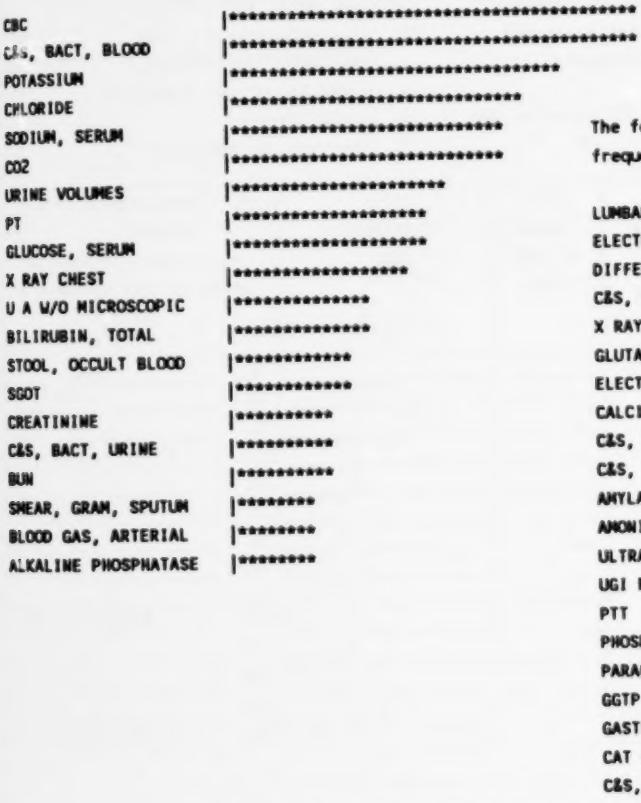
2 4 6 8 10 12 14 16 18 20 22 24 26 28 30 32 34 36 38 40 42 44 46 48 50

Number of Tests Requested Nationwide Distribution*

*Represents the frequency of tests requested based on range of choices listed on DPC survey form (reverse side).

HEPATOBILIARY DIAGNOSTIC PROCEDURE FOR NON-MALIGNANCY
PRIMARY DIAGNOSIS - ALCOHOLIC LIVER DISEASE
NATIONWIDE HISTOGRAM
PATIENT'S CONDITION - UNSTABLE
1986 - 1989

CASE STUDY #2006: A 39-year-old man has recently been suspended from work because of "problem drinking". His alcohol consumption has been a pint of whiskey or more daily, for the past three years. On admission you ordered the standard tests to confirm your clinical impression of Laennec's cirrhosis, R/O alcoholic hepatitis: Br 2.5, IndBr 0.8, LDH 520, ALK PHOS 69, SGOT 128. Liver biopsy confirmed your diagnosis of alcoholic hepatitis/ Br 2.5, IndBr 0.8, LDH 520, ALK PHOS 69, SGOT 128. Liver biopsy confirmed your diagnosis of alcoholic hepatitis/ Laennec's cirrhosis. The patient has been hospitalized for 3 days and you treated him aggressively. His vital signs have suddenly become unstable - BP 100/50, P. 110 (regular), T. 101 F. What test/drugs will you order to monitor/treat this patient, assuming that his condition deteriorates into hepatic coma and he remains unstable until his ultimate demise 14 days hence?



The following tests have a frequency distribution of four or less.

LUMBAR PUNCTURE
ELECTROLYTES URINE
DIFFERENTIAL
C&S, BACT, ASCITIC FLUID
X RAY ABDOMEN
GLUTAMINE, CSF
ELECTROCARDIOGRAM
CALCIUM
C&S, BACT, SPUTUN
C&S, BAC, CSF
AMYLASE, SERUM
AMONIA
ULTRASOUND GALL BLADDER
UGI PANENDOSCOPY
PTT
PHOSPHORUS
PARACENTESIS
GGTP
GASTRIC ANALYSIS
CAT SCAN LIVER
C&S, BACT, PARACENTESIS

Number of Physicians answering survey for this disease - 7

Number of VAMCs answering survey for this disease - 3

2 4 6 8 10 12 14 16 18 20 22 24 26 28 30 32 34 36 38 40 42 44 46 48 50

Number of Tests Requested Nationwide Distribution*

*Represents the frequency of tests requested based on range of choices listed on DPC survey form (reverse side).

UNSTABLE

DIAGNOSTIC PATTERNS OF CARE (DPC) - SURVEY FORM

(1) VAMC STATION NUMBER: _____ (2.) MEDICAL SCHOOL AFFILIATION_____ 113.5006

(3.) SPECIALTY _____ (4.) YEARS IN SPECIALITY _____

(5.) DRG (200) HEPATOBILIARY DIAGNOSTIC PROCEDURE FOR NON-MALILGNANCY

(6.) PRINCIPAL DIAGNOSIS: 5710-13, 5715-19, 57140

(7.) PATIENT STATUS: UNSTABLE

(7.A) Dx: ALCOHOLIC LIVER DISEASE

CASE STUDY #2006: A 39-year-old man has recently been suspended from work because of "problem drinking". His alcohol consumption has been a pint of whiskey or more daily, for the past three years. On admission you ordered the standard tests to confirm your clinical impression of Laennec's cirrhosis, R/O alcoholic hepatitis: Br 2.5, IndBr 0.8, LDH 520, ALK PHOS 69, SGOT 128. Liver biopsy confirmed your diagnosis of alcoholic hepatitis/ Lannec's cirrhosis. The patient has been hospitalized for 3 days and you treated him aggressively. His vital signs have suddenly become unstable - BP 100/50, P. 110 (regular), T. 101 F. What test/drugs will you order to monitor/treat this patient, assuming that his condition deteriorates into hepatic coma and he remains unstable until his ultimate demise 14 days hence?

LEGEND OF CODES

Code VALUE OF TEST
1. Highly necessary
2. Moderately necessary
3. Somewhat necessary
4. Not necessary

Code FREQUENCY OF TESTS
1. Once daily for one day only
2. Once daily for 2-3 days
3. Once daily for 3-5 days
4. Once daily for >5 days
5. Other (enter own freq/days)
6. P.R.N. only
7. Once only on admission

DIRECTIONS: Fill in the sections below (8-10-11-12) based on the diagnosis in (7.A) above.

(8.) DIAGNOSTIC TEST(S) NEEDED (Do NOT use profile or instrument names for lab tests)	(9.) PURPOSE OF TEST	(10.) VALUE OF TEST CODE	(11.) FREQUENCY CODE	(12.) PHYSICIAN'S DRUG THERAPY Your Drug(s) of Choice Write in your drug(s) of Choice
1. _____		_____	_____	1. _____
2. _____		_____	_____	2. _____
3. _____		_____	_____	3. _____
4. _____	MONITOR	_____	_____	4. _____
5. _____	UNSTABLE	_____	_____	5. _____
6. _____		_____	_____	6. _____
7. _____		_____	_____	7. _____
8. _____	(DO	_____	_____	8. _____
9. _____	NOT	_____	_____	9. _____
10. _____	ENTER	_____	_____	10. _____
11. _____	DATA	_____	_____	11. _____
12. _____	IN THIS	_____	_____	12. _____
13. _____	COLUMN)	_____	_____	13. _____
14. _____		_____	_____	14. _____
15. _____		_____	_____	15. _____

COMMENTS:

Revised 9/84 EMT/MCC

STABLE

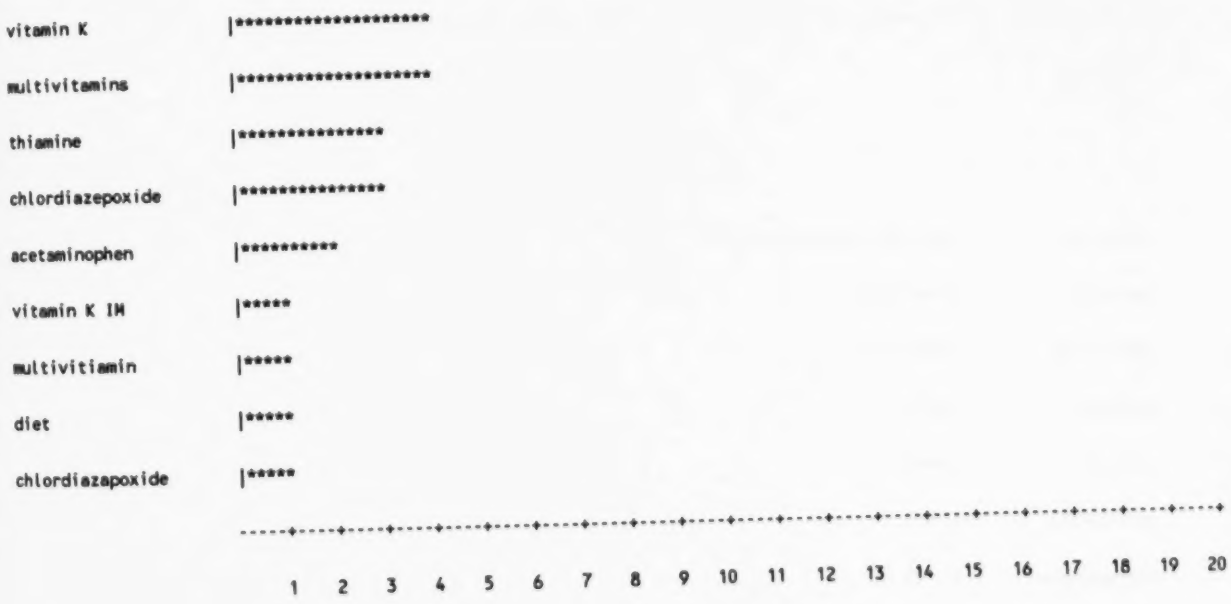
HEPATOBILIARY DIAGNOSTIC PROCEDURE FOR NON-MALIGNANCY

PRIMARY DIAGNOSIS - ALCOHOLIC LIVER DISEASE

PATIENT'S CONDITION - STABLE

NATIONWIDE HISTOGRAM FOR DRUGS

CASE STUDY: A 39-year-old man has recently been suspended from work on condition that he seek help for "problem drinking." He consumes a pint of whiskey or more, per day, often starting to drink before work in the morning. On exam, there is an odor suggestive of alcohol. He is alert, and has no stigmata of hepatic impairment. What screening tests will you order to substantiate your clinical impression of Laennec's cirrhosis, R/O alcoholic hepatitis?



UNSTABLE

HEPATOBILIARY DIAGNOSTIC PROCEDURE FOR NON-MALIGNANCY

PRIMARY DIAGNOSIS - ALCOHOLIC LIVER DISEASE

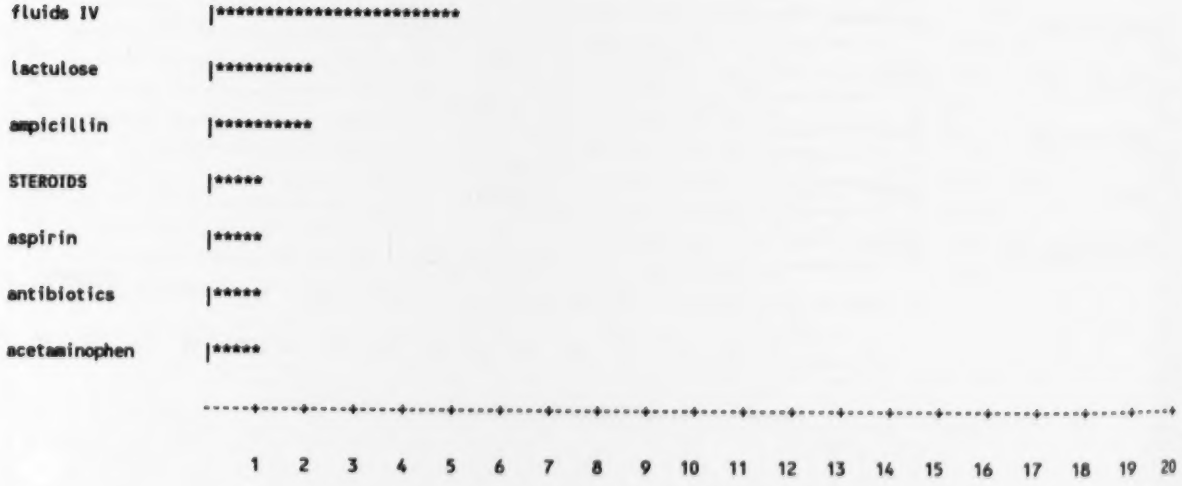
NATIONWIDE HISTOGRAM FOR DRUGS

PATIENT'S CONDITION - UNSTABLE

CASE STUDY: A 39-year-old man has recently been suspended from work because of "problem drinking". His alcohol consumption has been a pint of whiskey or more daily, for the past three years. On admission you ordered the standard tests to confirm your clinical impression of Laennec's cirrhosis, R/O alcoholic hepatitis: Br 2.5, IndBr 0.8, LDH 520, ALK PHOS 69, SGOT 128. Liver biopsy confirmed your diagnosis of alcoholic hepatitis/ Lannec's cirrhosis. The patient has been hospitalized for 3 days and you treated him aggressively.

His vital signs have suddenly become unstable - BP 100/50, P. 110 (regular), T. 101 F.

What test/drugs will you order to monitor/treat this patient, assuming that his condition deteriorates into hepatic coma and he remains unstable until his ultimate demise 14 days hence?



CEREBELLAR HEMORRHAGE

DIAGNOSTIC PATTERNS OF CARE (DPC) - SURVEY FORM

(1) VAMC STATION NUMBER: _____ (2.) MEDICAL SCHOOL AFFILIATION_____ 113.1207

(3.) SPECIALTY _____ (4.) YEARS IN SPECIALTY _____

(5.) DRG (14) CEREBROVASCULAR DISORDERS EXCEPT TIA

(6.) PRINCIPAL DIAGNOSIS: 4329

(7.) PATIENT STATUS: STABLE

(7.A) Dx: CEREBELLAR HEMORRHAGE

CASE STUDY #14-1: A 56-year-old hypertensive woman experiences the acute onset of vomiting, headache, and inability to walk several hours ago. Her BP is 220/110mm Hg. Her P was 110 and regular but physical examination shows slight nuchal rigidity, impaired conjugate lateral eye movement, full power in the extremities without limb ataxia, and inability to walk. What screening procedures and tests will you order to substantiate your your clinical impression that she has had a cerebellar hemorrhage? What tests and procedures will you order to monitor your treatment?

LEGEND OF CODES

Code	VALUE OF TEST	Code	FREQUENCY OF TESTS
1.	Highly necessary	1.	Once daily for one day only
2.	Moderately necessary	2.	Once daily for 2-3 days
3.	Somewhat necessary	3.	Once daily for 3-5 days
4.	Not necessary	4.	Once daily for >5 days
		5.	Other (enter own freq/days)
		6.	P.R.N. only
		7.	Once only on admission

DIRECTIONS: Fill in the sections below (8-10-11-12) based on the diagnosis in (7.A) above.

(8.) DIAGNOSTIC TEST(S) NEEDED (Do NOT use profile or instrument names for lab tests)	(9.) PURPOSE OF TEST	(10.) VALUE OF TEST CODE	(11.) FREQUENCY CODE	(12.) PHYSICIAN'S DRUG THERAPY Your Drug(s) of Choice Write in your drug(s) of Choice
1.				1.
2.				2.
3.				3.
4.	ADMISSION			4.
5.	STABLE			5.
6.				6.
7.				7.
8.	(DO			8.
9.	NOT			9.
10.	ENTER			10.
11.	DATA			11.
12.	IN THIS			12.
13.	COLUMN)			13.
14.				14.
15.				15.

COMMENTS:

Revised 9/84 EMT/MCC

TESTS STABLE

CEREBROVASCULAR DISORDERS EXCEPT TIA
PRIMARY DIAGNOSIS - CEREBELLER HEMORRHAGE
NATIONWIDE DISTRIBUTION
PATIENT'S CONDITION - STABLE
1986 - 1989

CASE STUDY: A 56-year-old hypertensive woman experiences the acute onset of vomiting, headache, and inability to walk several hours ago. Her BP is 220/110mm Hg. Her P was 110 and regular but physical examination shows slight nuchal rigidity, im aired conjugate lateral eye movement, full power in the extremities without limb ataxia, and inability to walk. What screening procedures and tests will you order to substantiate your your clinical impression that she has had a cerebellar hemorrhage? What tests and procedures will you order to monitor your treatment?

*Represents the frequency of tests requested based on choices listed on the DPC survey form (reverse side).

CEREBROVASCULAR DISORDERS EXCEPT TIA
PRIMARY DIAGNOSIS - CEREBELLAR HEMORRHAGE
NATIONWIDE DISTRIBUTION
PATIENT'S CONDITION - UNSTABLE
1986 - 1989

CASE STUDY: You admitted a 56 year old hypertensive woman two days ago to the intensive care unit because of acute onset of vomiting, headache, and inabiliy to walk. Her P was 110 and irregular and her BP was 220/110 mm Hg. Physical examination showed slight nuchal rigidity, impaired conjugate lateral eye movement, full power in the extremities without limb ataxia, and inability to walk. She is breathing with difficulty at present, and her vital signs are still unstable. You have ordered screening and confirmatory tests/procedures that substantiate your clinical impression that she has had a cerebellar hemorrhage. What tests will you order to monitor your treatment and follow her progress?

The following tests have a frequency distribution of two or less.

X RAY SKULL
TYPE & CROSSMATCH
MRI
MAGNESIUM
GGTP
FUNGUS EXAM
CRANIAL PRESSURE
CPK
ALKALINA PHOSPHATASE
CARTICD DUPLEX STUDY
BILIRUBIN, DIRECT

Number of Physicians answering survey for this disease - 24
Number of VAMCs answering survey for this disease - 10

*Represents the frequency of tests requested based on range of choices listed on DPC survey form (reverse side).

TESTS UNSTABLE

DIAGNOSTIC PATTERNS OF CARE (DPC) - SURVEY FORM

(1) VAMC STATION NUMBER: _____ (2.) MEDICAL SCHOOL AFFILIATION_____ 113.1212

(3.) SPECIALTY _____ (4.) YEARS IN SPECIALTY _____

(5.) DRG (14) CEREBROVASCULAR DISORDERS EXCEPT TIA

(6.) PRINCIPAL DIAGNOSIS: 4329

(7) PATIENT STATUS: UNSTABLE

(7.A) Dx: CEREBELLAR HEMORRHAGE

CASE STUDY #14-6: You admitted a 56 year old hypertensive woman two days ago to the intensive care unit because of acute onset of vomiting, headache, and inabiliy to walk. Her P was 110 and irregular and her BP was 220/110 mm Hg. Physical examination showed slight nuchal rigidity, impaired conjugate lateral eye movement, full power in the extremities without limb ataxia, and inability to walk. She is breathing with difficulty at present, and her vital signs are still unstable. You have ordered screening and confirmatory tests/procedures that substantiate your clinical impression that she has had a cerebellar hemorrhage. What tests will you order to monitor your treatment and follow her progress?

LEGEND OF CODES

Code	VALUE OF TEST	Code	FREQUENCY OF TESTS
1.	Highly necessary	1.	Once daily for one day only
2.	Moderately necessary	2.	Once daily for 2-3 days
3.	Somewhat necessary	3.	Once daily for 3-5 days
4.	Not necessary	4.	Once daily for >5 days
		5.	Other (enter own freq/days)
		6.	P.R.N. only
		7.	Once only on admission

DIRECTIONS: Fill in the sections below (8-10-11-12) based on the diagnosis in (7.A) above.

(8.) DIAGNOSTIC TEST(S) NEEDED (Do NOT use profile or instrument names for lab tests)	(9.) PURPOSE OF TEST	(10.) VALUE OF TEST CODE	(11.) FREQUENCY CODE	(12.) PHYSICIAN'S DRUG THERAPY Your Drug(s) of Choice Write in your drug(s) of Choice
1.				1.
2.				2.
3.				3.
4.	MONITOR			4.
5.	UNSTABLE			5.
6.				6.
7.				7.
8.	(DO			8.
9.	NOT			9.
10.	ENTER			10.
11.	DATA			11.
12.	IN THIS			12.
13.	COLUMN)			13.
14.				14.
15.				15.

COMMENTS:

Revised 9/84 EMT/MCC

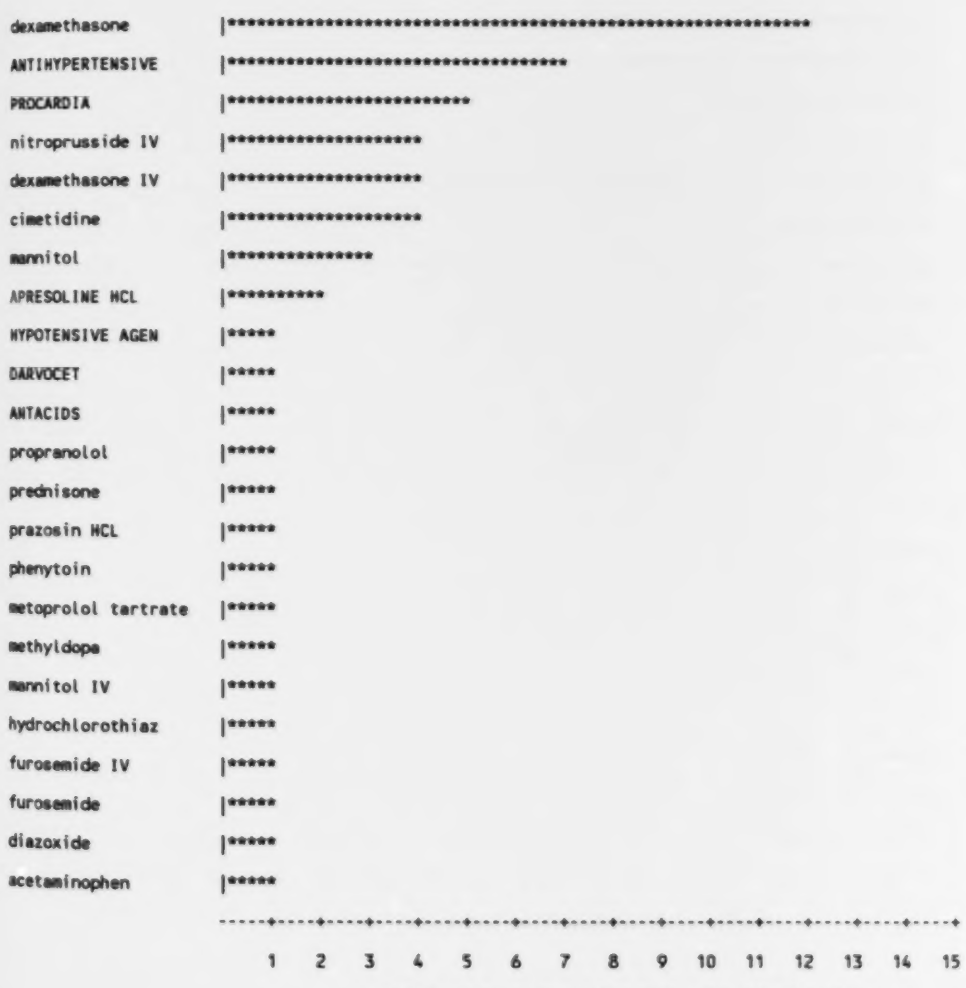
CEREBROVASCULAR DISORDERS EXCEPT TIA

PRIMARY DIAGNOSIS - CEREBELLAR HEMORRHAGE

NATIONWIDE DISTRIBUTION FOR DRUGS

PATIENT'S CONDITION - STABLE

CASE STUDY: A 56-year-old hypertensive woman experiences the acute onset of vomiting, headache, and inability to walk several hours ago. Her BP is 220/110mm Hg. Her P was 110 and regular but physical examination shows slight nuchal rigidity, im aired conjugate lateral eye movement, full power in the extremities without limb ataxia, and inability to walk. What screening procedures and tests will you order to substantiate your your clinical impression that she has had a cerebellar hemorrhage? What tests and procedures will you order to monitor your treatment?



DRUGS UNSTABLE

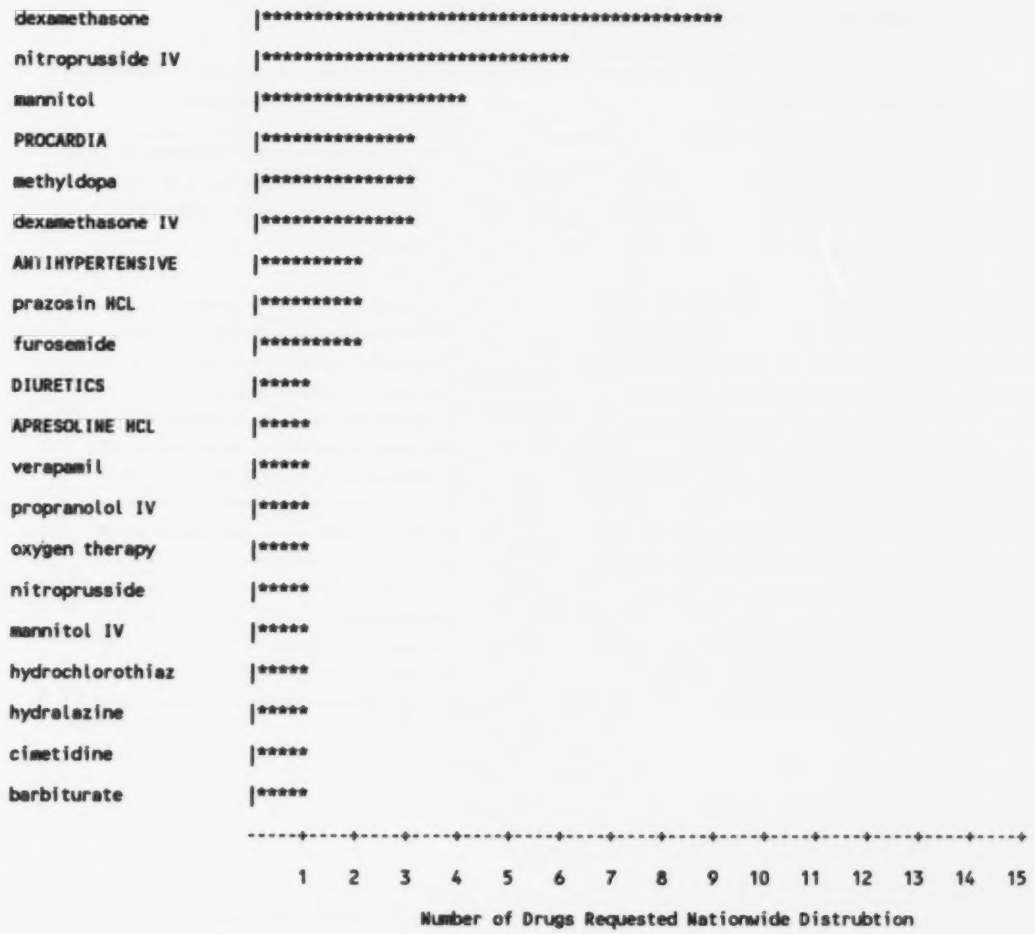
CEREBROVASCULAR DISORDERS EXCEPT TIA

PRIMARY DIAGNOSIS - CEREBELLAR HEMORRHAGE

NATIONWIDE DISTRIBUTION FOR DURGS

PATIENT'S CONDITION - UNSTABLE

CASE STUDY: You admitted a 56 year old hypertensive woman two days ago to the intensive care unit because of acute onset of vomiting, headache, and inabiliy to walk. Her P was 110 and irregular and her BP was 220/110 mm Hg. Physical examination showed slight nuchal rigidity, impaired conjugate lateral eye movement, full power in the extremities without limb ataxia, and inability to walk. She is breathing with difficulty at present, and her vital signs are still unstable. You have ordered screening and confirmatory tests/procedures that substantiate your clinical impression that she has had a cerebellar hemorrhage. What tests will you order to monitor your treatment and follow her progress?



HODGKIN'S DISEASE

STABLE

DIAGNOSTIC PATTERNS OF CARE (DPC) - SURVEY FORM

(1) VAMC STATION NUMBER: _____ (2.) MEDICAL SCHOOL AFFILIATION_____ 113.1401

(3.) SPECIALTY _____ (4.) YEARS IN SPECIALTY _____

(5.) DRG (404) LYMPHOMA OR LEUKEMIA AGE 18-69 W/O CC

(6.) PRINCIPAL DIAGNOSIS: 20100-20198

(7.) PATIENT STATUS: STABLE

(7.A) Dx: HODGKIN'S DISEASE

CASE STUDY #403-404-1: A 35-year-old white male mechanic was seen in the Emergency Ward because of the recent onset of facial edema and headache. Five years previously, an excisional biopsy of a mass in the right cervical region was undertaken at another hospital. He was subsequently treated with radiotherapy to this region with complete regression of the mass. He was well until one month prior to admission when he noted a lump in the supraclavicular region, which was slightly tender and gradually increased in size. On physical exam, there was edema over his face, neck and the upper part of his chest wall. The neck veins were distended on sitting and the superficial veins over his arms and chest wall were prominent. His voice was somewhat hoarse. There was a palpable lymph node of rubbery consistency about 3x4cm in size over the left supraclavicular region. Exam of the lung, heart and abdomen were normal. There was no edema in the lower extremities. What tests and procedures will you order to screen this patient on admission to substantiate your clinical impression of lymphoproliferative disorder? What therapy will you prescribe and what tests will you order to monitor your therapy?

LEGEND OF CODES

Code	VALUE OF TEST	Code	FREQUENCY OF TESTS
1.	Highly necessary	1.	Once daily for one day only
2.	Moderately necessary	2.	Once daily for 2-3 days
3.	Somewhat necessary	3.	Once daily for 3-5 days
4.	Not necessary	4.	Once daily for >5 days
		5.	Other (enter own freq/days)
		6.	P.R.N. only
		7.	Once only on admission

DIRECTIONS: Fill in the sections below (8-10-11-12) based on the diagnosis in (7.A) above.

(8.) DIAGNOSTIC TEST(S) NEEDED (Do NOT use profile or instrument names for lab tests)	(9.) PURPOSE OF TEST	(10.) VALUE OF TEST CODE	(11.) FREQUENCY CODE	(12.) PHYSICIAN'S DRUG THERAPY Your Drug(s) of Choice Write in your drug(s) of Choice
1. _____		_____	_____	1. _____
2. _____		_____	_____	2. _____
3. _____		_____	_____	3. _____
4. _____	SCREENING	_____	_____	4. _____
5. _____	ADMISSION	_____	_____	5. _____
6. _____	STABLE	_____	_____	6. _____
7. _____		_____	_____	7. _____
8. _____	(DO	_____	_____	8. _____
9. _____	NOT	_____	_____	9. _____
10. _____	ENTER	_____	_____	10. _____
11. _____	DATA	_____	_____	11. _____
12. _____	IN THIS	_____	_____	12. _____
13. _____	COLUMN)	_____	_____	13. _____
14. _____		_____	_____	14. _____
15. _____		_____	_____	15. _____

COMMENTS:

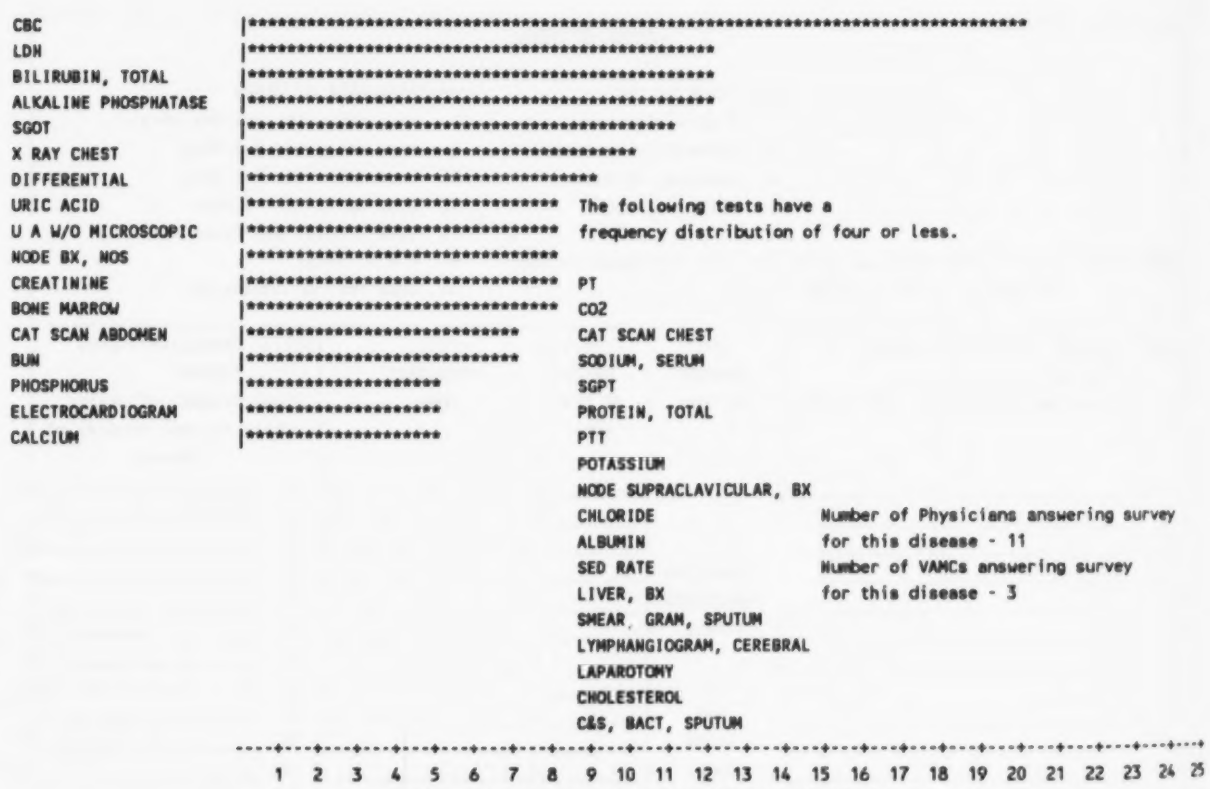
Place comments on the back.

Revised 9/84 EMT/MCC

TESTS STABLE

LYMPHOMIA OR LEUKEMIA
PRIMARY DIAGNOSIS - HODGKIN'S DISEASE
NATIONWIDE HISTOGRAM
PATIENT'S CONDITION - STABLE
1986 - 1989

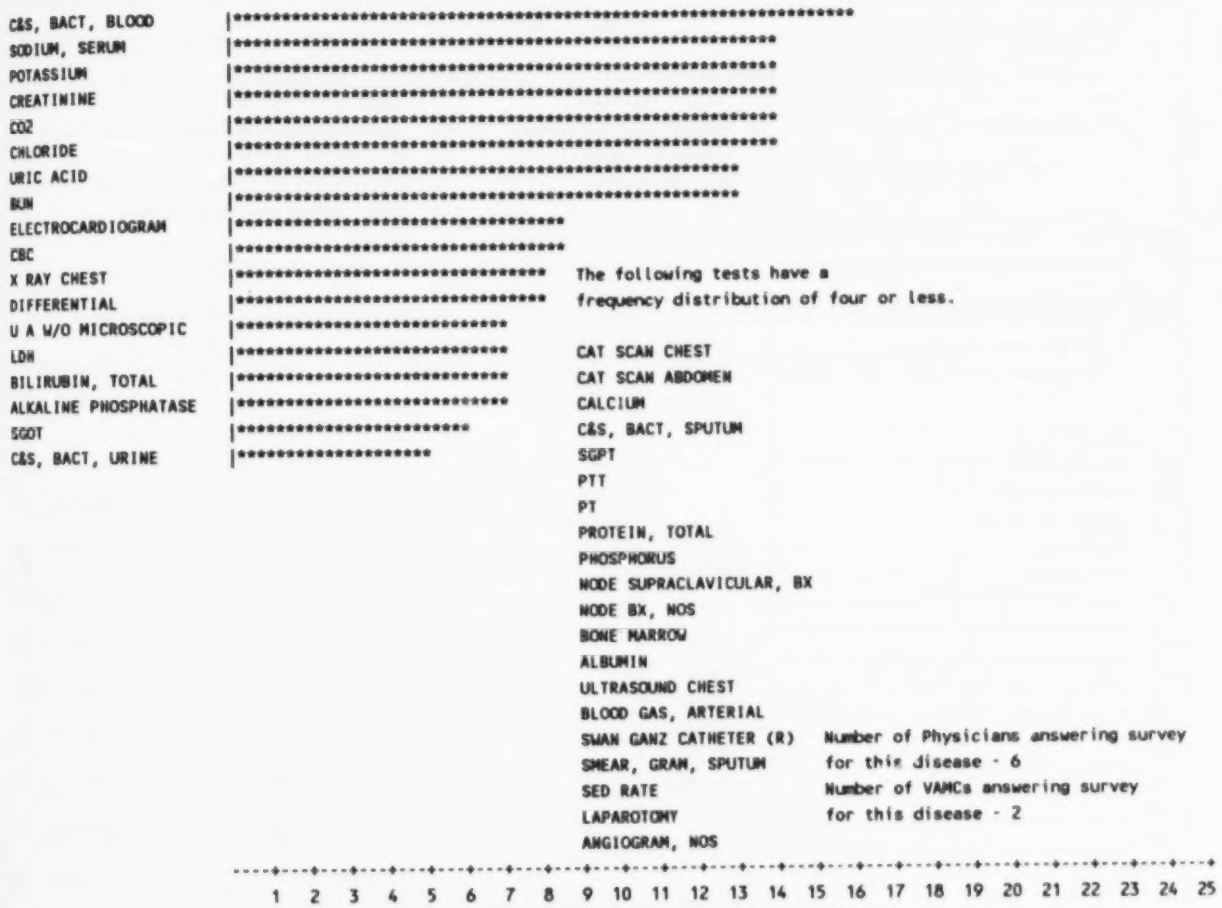
CASE STUDY: A 35-year-old white male mechanic was seen in the Emergency Ward because of the recent onset of facial edema and headache. Five years previously, an excisional biopsy of a mass in the right cervical region was undertaken at another hospital. He was subsequently treated with radiotherapy to this region with complete regression of the mass. He was well until one month prior to admission when he noted a lump in the supraclavicular region, which was slightly tender and gradually increased in size. On physical exam, there was edema over his face, neck and the upper part of his chest wall. The neck veins were distended on sitting and the superficial veins over his arms and chest wall were prominent. His voice was somewhat hoarse. There was a palpable lymph node of rubbery consistency about 3x4cm in size over the left supraclavicular region. Exam of the lung, heart and abdomen were normal. There was no edema in the lower extremities. What tests and procedures will you order to screen this patient on admission to substantiate your clinical impression of lymphoproliferative disorder? What therapy will you prescribe and what tests will you order to monitor your therapy?



*Represents the frequency of tests requested based on range of choices listed on DPC survey form (reverse side).

LYMPHOMIA OR LEUKEMIA
PRIMARY DIAGNOSIS - HODGKIN'S DISEASE
NATIONWIDE HISTOGRAM
PATIENT'S CONDITION - UNSTABLE
1986 - 1989

CASE STUDY: Three days ago, a 35-year-old white male mechanic was seen in the ER and admitted because of the recent onset of facial edema and headache. Five years previously, an excisional biopsy of a mass in the cervical region was undertaken at another hospital. He was subsequently treated with radiotherapy to this region with complete regression of the mass. He was well until one month prior to admission when he noted a lump in the supraclavicular region, which was slightly tender and gradually increased in size. On physical exam, there was edema over his face, neck and the upper part of his chest wall. The neck veins were distended on sitting and the superficial veins over his arms and chest wall were prominent. You have established that he has non-Hodgkin's lymphoma by using screening and confirmatory tests and procedures. He has deteriorated and his BP is now 100/50, P 140 and irregular. He is in respiratory distress and his temperature is 103.5 F. What tests and procedures will you order to monitor his progress and your therapy?



*Represents the frequency of tests requested based on range of choices listed on DPC survey form (reverse side).

UNSTABLE

DIAGNOSTIC PATTERNS OF CARE (DPC) - SURVEY FORM

(1) VAMC STATION NUMBER: _____ (2.) MEDICAL SCHOOL AFFILIATION_____ 113.1406

(3.) SPECIALTY _____ (4.) YEARS IN SPECIALTY _____

(5.) DRG (404) LYMPHOMA OR LEUKEMIA AGE 18-69 W/O CC

(6.) PRINCIPAL DIAGNOSIS: 20100-20198

(7.) PATIENT STATUS: UNSTABLE

(7.A) Dx: HODGKIN'S DISEASE

CASE STUDY #403-404-6: Three days ago, a 35-year-old white male mechanic was seen in the ER and admitted because of the recent onset of facial edema and headache. Five years previously, an excisional biopsy of a mass in the cervical region was undertaken at another hospital. He was subsequently treated with radiotherapy to this region with complete regression of the mass. He was well until one month prior to admission when he noted a lump in the supraclavicular region, which was slightly tender and gradually increased in size. On physical exam, there was edema over his face, neck and the upper part of his chest wall. The neck veins were distended on sitting and the superficial veins over his arms and chest wall were prominent. You have established that he has non-Hodgkin's lymphoma by using screening and confirmatory tests and procedures. He has deteriorated and his BP is now 100/50, P 140 and irregular. He is in respiratory distress and his temperature is 103.5 F. What tests and procedures will you order to monitor his progress and your therapy?

LEGEND OF CODES

Code	VALUE OF TEST	Code	FREQUENCY OF TESTS
1.	Highly necessary	1.	Once daily for one day only
2.	Moderately necessary	2.	Once daily for 2-3 days
3.	Somewhat necessary	3.	Once daily for 3-5 days
4.	Not necessary	4.	Once daily for >5 days
		5.	Other (enter own freq/days)
		6.	P.R.N. only
		7.	Once only on admission

DIRECTIONS: Fill in the sections below (8-10-11-12) based on the diagnosis in (7.A) above.

(8.) DIAGNOSTIC TEST(S) NEEDED (Do NOT use profile or instrument names for lab tests)	(9.) PURPOSE OF TEST	(10.) VALUE OF TEST CODE	(11.) FREQUENCY CODE	(12.) PHYSICIAN'S DRUG THERAPY Your Drug(s) of Choice Write in your drug(s) of Choice
1. _____				1. _____
2. _____				2. _____
3. _____				3. _____
4. _____	MONITOR			4. _____
5. _____	UNSTABLE			5. _____
6. _____				6. _____
7. _____				7. _____
8. _____	(DO			8. _____
9. _____	NOT			9. _____
10. _____	ENTER			10. _____
11. _____	DATA			11. _____
12. _____	IN THIS			12. _____
13. _____	COLUMN)			13. _____
14. _____				14. _____
15. _____				15. _____

COMMENTS:

Revised 9/84 EMT/HCC

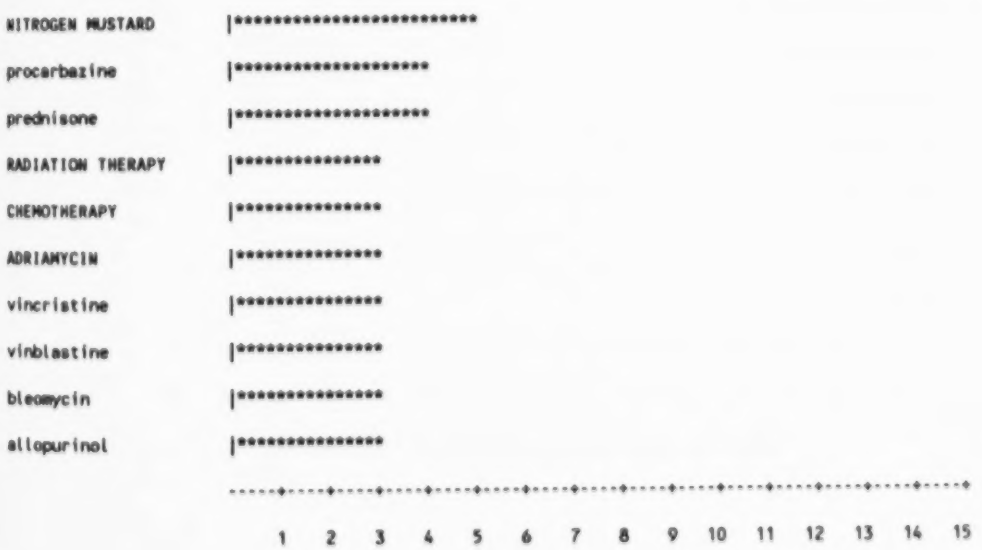
LYMPHOMIA OR LEUKEMIA

PRIMARY DIAGNOSIS - HODGKIN'S DISEASE

NATIONWIDE HISTOGRAM - DRUGS

PATIENT'S CONDITION - STABLE

CASE STUDY: A 35-year-old white male mechanic was seen in the Emergency Ward because of the recent onset of facial edema and headache. Five years previously, an excisional biopsy of a mass in the right cervical region was undertaken at another hospital. He was subsequently treated with radiotherapy to this region with complete regression of the mass. He was well until one month prior to admission when he noted a lump in the supraclavicular region, which was slightly tender and gradually increased in size. On physical exam, there was edema over his face, neck and the upper part of his chest wall. The neck veins were distended on sitting and the superficial veins over his arms and chest wall were prominent. His voice was somewhat hoarse. There was a palpable lymph node of rubbery consistency about 3x4cm in size over the left supraclavicular region. Exam of the lung, heart and abdomen were normal. There was no edema in the lower extremities. What tests and procedures will you order to screen this patient on admission to substantiate your clinical impression of lymphoproliferative disorder? What therapy will you prescribe and what tests will you order to monitor your therapy?



DRUGS UNSTABLE

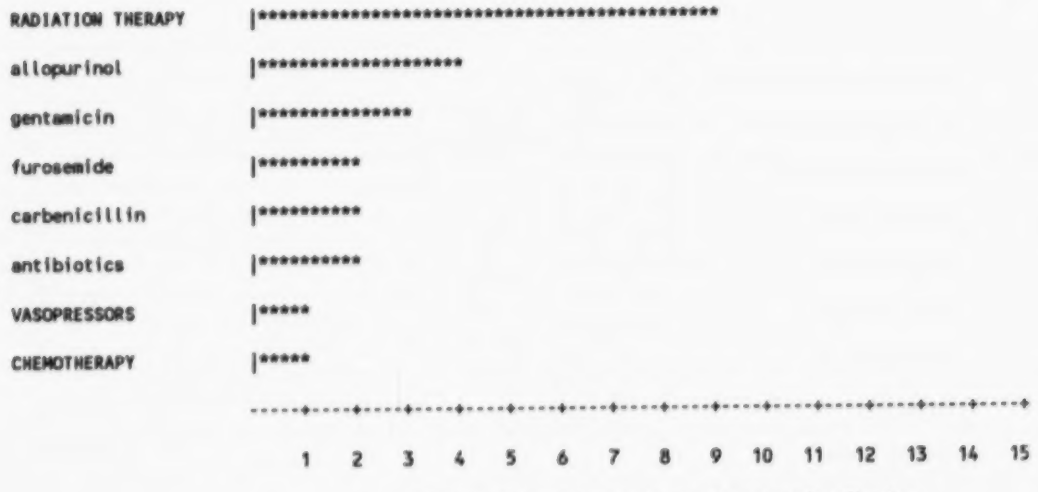
LYMPHOMIA OR LEUKEMIA

PRIMARY DIAGNOSIS - HODGKIN'S DISEASE

NATIONWIDE HISTOGRAM - DRUGS

PATIENT'S CONDITION - UNSTABLE

CASE STUDY: Three days ago, a 35-year-old white male mechanic was seen in the ER and admitted because of the recent onset of facial edema and headache. Five years previously, an excisional biopsy of a mass in the cervical region was undertaken at another hospital. He was subsequently treated with radiotherapy to this region with complete regression of the mass. He was well until one month prior to admission when he noted a lump in the supraclavicular region, which was slightly tender and gradually increased in size. On physical exam, there was edema over his face, neck and the upper part of his chest wall. The neck veins were distended on sitting and the superficial veins over his arms and chest wall were prominent. You have established that he has non-Hodgkin's lymphoma by using screening and confirmatory tests and procedures. He has deteriorated and his BP is now 100/50, P 140 and irregular. He is in respiratory distress and his temperature is 103.5 F. What tests and procedures will you order to monitor his progress and your therapy?



SENILE CATARACTS

DIAGNOSTIC PATTERNS OF CARE (DPC) - SURVEY FORM

(1) VAMC STATION NUMBER: _____ (2.) MEDICAL SCHOOL AFFILIATION_____ 113.1207

(3.) SPECIALTY _____ (4.) YEARS IN SPECIALTY _____

(5.) DRG (14) CEREBROVASCULAR DISORDERS EXCEPT TIA

(6.) PRINCIPAL DIAGNOSIS: 4329

(7.) PATIENT STATUS: STABLE

(7.A) Dx: CEREBELLAR HEMORRHAGE

CASE STUDY #14-1: A 56-year-old hypertensive woman experiences the acute onset of vomiting, headache, and inability to walk several hours ago. Her BP is 220/110mm Hg. Her P was 110 and regular but physical examination shows slight nuchal rigidity, impaired conjugate lateral eye movement, full power in the extremities without limb ataxia, and inability to walk. What screening procedures and tests will you order to substantiate your your clinical impression that she has had a cerebellar hemorrhage? What tests and procedures will you order to monitor your treatment?

LEGEND OF CODES

Code	VALUE OF TEST	Code	FREQUENCY OF TESTS
1.	Highly necessary	1.	Once daily for one day only
2.	Moderately necessary	2.	Once daily for 2-3 days
3.	Somewhat necessary	3.	Once daily for 3-5 days
4.	Not necessary	4.	Once daily for >5 days
		5.	Other (enter own freq/days)
		6.	P.R.N. only
		7.	Once only on admission

DIRECTIONS: Fill in the sections below (8-10-11-12) based on the diagnosis in (7.A) above.

(8.) DIAGNOSTIC TEST(S) NEEDED (Do NOT use profile or instrument names for lab tests)	(9.) PURPOSE OF TEST	(10.) VALUE OF TEST CODE	(11.) FREQUENCY CODE	(12.) PHYSICIAN'S DRUG THERAPY Your Drug(s) of Choice Write in your drug(s) of Choice
1. _____		_____	_____	1. _____
2. _____		_____	_____	2. _____
3. _____		_____	_____	3. _____
4. _____	ADMISSION	_____	_____	4. _____
5. _____	STABLE	_____	_____	5. _____
6. _____		_____	_____	6. _____
7. _____		_____	_____	7. _____
8. _____	(DO	_____	_____	8. _____
9. _____	NOT	_____	_____	9. _____
10. _____	ENTER	_____	_____	10. _____
11. _____	DATA	_____	_____	11. _____
12. _____	IN THIS	_____	_____	12. _____
13. _____	COLUMN)	_____	_____	13. _____
14. _____		_____	_____	14. _____
15. _____	_____	_____	_____	15. _____

COMMENTS:

Revised 9/84 EMT/MCC

LENS PROCEDURES
PRIMARY DIAGNOSIS - SENILE CATARACTS
NATIONWIDE HISTOGRAM
PATIENT'S CONDITION - STABLE
1986 - 1989

CASE STUDY: An 83-year-old man has noted progressive visual blurring, initially with distant vision, but now also with near vision. For the past 10 years he has had stable angina which has responded well to symptomatic medical management. Examination reveals markedly impaired visual acuity bilaterally, not improved with glasses, and bilateral mature senile cataracts. You admitted him yesterday to prepare him for surgery and establish his medical status. What tests will you order to confirm his eye problems, confirm his diagnosis of angina, and evaluate his preoperative status?

*Represent the frequency of tests requested based on range of choices listed on DPC survey form (reverse side).

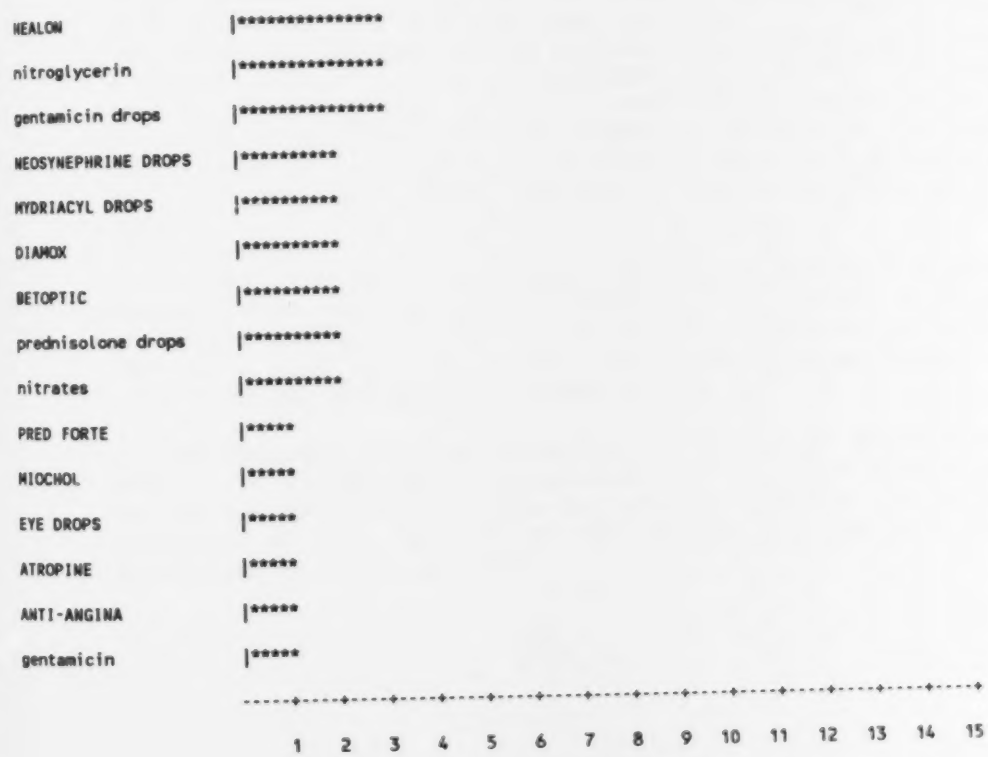
PRIMARY DIAGNOSIS - SENILE CATARACTS

NATIONWIDE HISTOGRAM - DRUGS

PATIENT'S CONDITION - STABLE

1986 - 1989

CASE STUDY: An 83-year-old man has noted progressive visual blurring, initially with distant vision, but now also with near vision. For the past 10 years he has had stable angina which has responded well to symptomatic medical management. Examination reveals markedly impaired visual acuity bilaterally, not improved with glasses, and bilateral mature senile cataracts. What admission tests and procedures will you order to prepare him for surgery and evaluate his medical status? What tests will you order to monitor his medical condition?



SECTION IV

RETROSPECTIVE STUDY - Diagnostic Tests Ordered for AIDS Patients

Study Design and Method

This study was conceived based on the need for more accurate costing and accounting methods for the distribution of AIDS dollars in VA medical centers. In August 1987 a Task Force composed of VA medical center and VA Center Office subject matter experts in hospital administration and AIDS developed a set of costing instructions and a patient information package. These were distributed to six VA medical centers: New York, West Los Angeles, San Francisco, Miami, Bronx, and Houston. The patient information package instructions ensured that a consistent methodology would be instituted by all participating VA medical centers. These hospitals were chosen because they represented a cross-section of the largest AIDS case providers in the VA and were located in geographical areas that are comprised mainly of the two major risk groups - homosexuals/ bisexuals, intravenous drug abusers, and/or a combination thereof. Further, they regularly submitted CDC reports to Central Office, making their workloads more easily identifiable and quantifiable.

The participants were requested to obtain concurrent 6-month retrospective direct care cost data for all inpatient and outpatient care rendered during that time period from five randomly selected patients belonging to each of the following six categories: HIV+ - asymptomatic; ARC with lymphadenopathy; ARC without major opportunistic infection; AIDS; PCP; and death, for a total of thirty patients per medical center. These categories were chosen because they encompass the entire range of HIV-related diseases, they were believed to differentiate resource utilization and were easily identifiable. Further, the groupings are consistent with the Department of Veterans Affairs' Patient Treatment File (PTF) classification coding system. Participating hospitals used CDC criteria as a guide for the placement of patients into the respective categories. All direct care cost data except for diagnostic and procedure costs were separated into "Personal Services" and "All Other" categories and calculated by each VA medical center.

A diagnostic/procedure worksheet was included in each patient's information package that alphabetically listed all applicable diagnostic tests and procedures performed either in VA medical center or reference laboratories. The number and type of actual tests/procedures performed on each patient were recorded, and appear on pages 163-186.

A team approach was instituted for the review of the medical records under study. It was strongly recommended that the same composition of personnel review all pertinent records in order to maintain consistency. The team consisted of at least one of the following personnel, all with hands on experience with AIDS patients:

Admitting M.D.
Infectious Disease M.D.
Resident
Intern
Nursing Representative (R.N.)
Administrative Representative

Diagnosis and Treatment provided during one specified time period for AIDS-related conditions only were included this study. The following criteria were used to determine a random sample to be studied:

a. the patient must have been registered in the VA system for at least one year.

b. the patient must have had at least one clinic visit or inpatient admission within the past six months.

c. random selection of five patients from each of the following categories:

1. HIV+ (asymptomatic)
2. ARC (lymphadenopathy)
3. ARC without major opportunistic infection or carcinoma.
4. AIDS with major opportunistic infection or carcinoma, including Karposi's Sarcoma.*
5. PCP
6. Deaths due to ARC or AIDS.

Results

The diagnostic tests ordered for each of the six AIDS categories above were collated by computed data entry and ranked by order of frequency. When compared with each of the diseases studied in the Prospective DPC Delphi study, it was noted that a much larger volume of tests as well as a greater variety of tests were ordered for AIDS patients than for patients with non-AIDS diseases. However, there is great similarity between the top 25 tests ordered for all six categories of AIDS patients, and the top 25 tests ordered for the 18 non-AIDS diseases studied in the prospective Diagnostic Patterns of Care Study (Sections II & III).

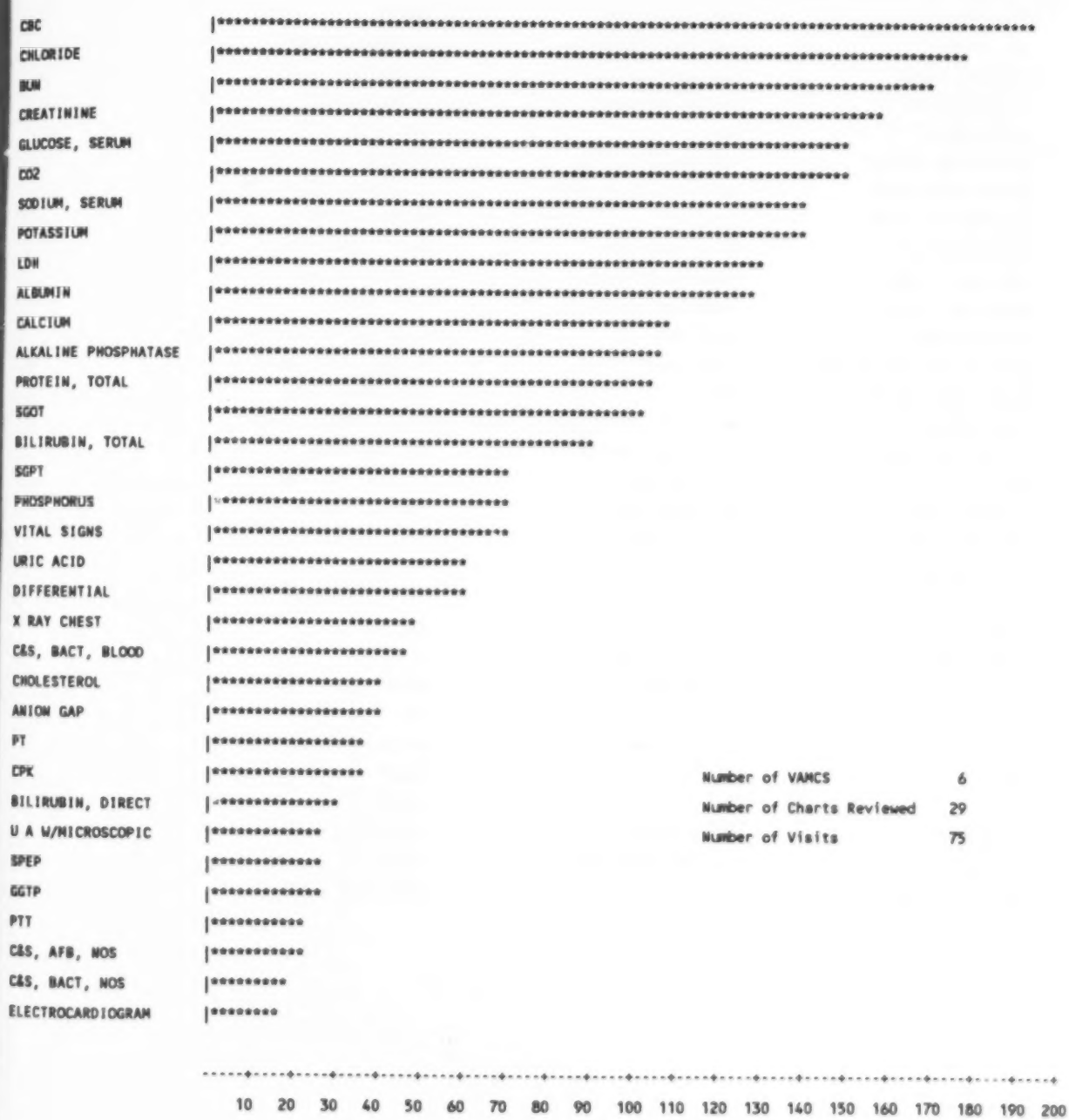
HIV Positive Patient

PRIMARY DIAGNOSIS - HIV+ (asymptomatic)

MOST FREQUENT TESTS REQUESTED FOR TREATMENT OF HIV+

PATIENT'S CONDITION - UNSTABLE

1987



Number of VAMCS	6
Number of Charts Reviewed	29
Number of Visits	75

HIV+ (asymptomatic)

The following have a frequency distribution of less than 20.

C&S, FUNGAL, NOS
STOOL, OVA & PARA
IRON BINDING CAP
HIV TITER
ULATRASOUND ABDOMEN
DRUG SCREEN
B12, SERUM
AMYLASE, SERUM
X RAY SHOULDER
VDRL, SERUM
SMEAR, AFB, SPUTUM
RETICULOCYTE COUNT
ELECTROLYTES URINE
ECHOCARDIOGRAM
C&S, BACT, STOOL
BLOOD GAS, ARTERIAL
URINE VOLUMES
RAPID PLASMA REAGIN TEST
JOINT FLUID ANALYSIS
IRON, SERUM
T-LYMPH CELL RAT
SED RATE
DILANTIN LEVEL
C&S, BACT, SPUTUM
X RAY ABDOMEN
TRIGLYCERIDES
STOOL, OCCULT BLOOD
SMEAR, AFB, NOS
MAGNESIUM
IgM
IgG
IgA
FTA
FOLIC ACID, RBC
CAT SCAN CHEST
C&S, VIRAL, NOS

ASPIRATE, TRANSTHORACIC
BERNSTEIN TEST
BONE SCAN
C&S, BACT, SALMONELLA
CAT SCAN RENAL
COLD AGGLUTININS
ELECTROENCEPHALOGRAM
ELECTRON MICROSCOPIC
Hb ELECTROPHORES
MHA-TP
PHENOBARBITAL LEVEL
RBC DISTRIBUTION WIDTH
SKIN, BX
SMEAR, GRAM, NOS
THEOPHYLLINE LEVEL
UTLRASOUND RENAL
X RAY KNEE
X RAY SPINE
ANA
C&S, BACT, THROAT
C&S, VIRAL, SPUTUM
CAT SCAN NECK
CRYPTOCAg, NOS
GALLIUM, SCAN
NODE BX, NOS
PULMONARY FUNCTION, NOS
T3
VANCOMYCIN LEVEL
BONE MARROW
C&S, BACT, URINE
CAT SCAN ABDOMEN
HB profile
IVP
RENIN PLASMA
U A W/O MICROSCOPIC
WESTERN BLOT

BARIUM ENEMA
BETA HcG
C&S, BACT, EFFUSION
CAT SCAN KNEE
CELL COUNT, CSF
COOMBS
FLOUROSCOPY, NOS
GI SERIES
LITHIUM LEVEL
MOUTH, BX
PROTEIN, CSF
RHEUMATOID FACTOR
SMEAR, AFB, STOOL
SMEAR, GRAM, SPUTUM
ULTRASOUND GALL BLADDER
X RAY ANKLE
X RAY SACRAL-ILI
ALCOHOL LEVEL, BLOOD
BRONCHOSCOPY, BX
C&S, FUNGUS, SPUTUM
CAT SCAN HEAD
CAT SCAN SHOULDER
FERRITIN, SERUM
IVP, HYPERTENSIVE
PCP STAIN
SKIN TEST FUNGUS
T4
X RAY KUB
BRONCHOSCOPY, NOS
C&S, AFB, SPUTUM
GALL BLADDER STUDIES
HBeAG
LIVER, BX
SKIN TEST AFB
URINE, 24HR
ACID PHOSPHATASE

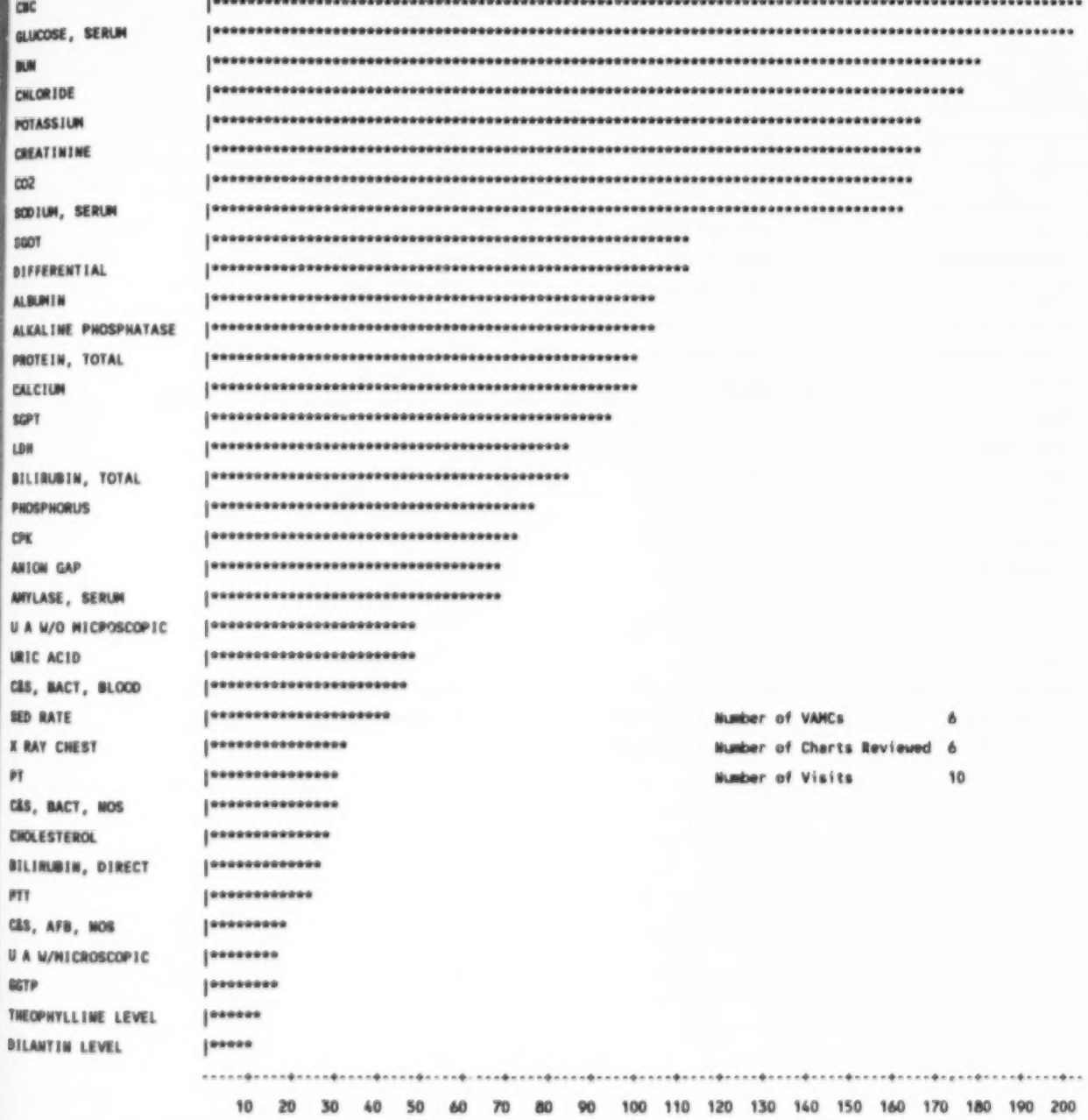
ARC (Lymphadenopathy)

PRIMARY DIAGNOSIS - ARC (lymphadenopathy)

MOST FREQUENT TESTS REQUESTED FOR TREATMENT OF ARC

PATIENT'S CONDITION - UNSTABLE

1987



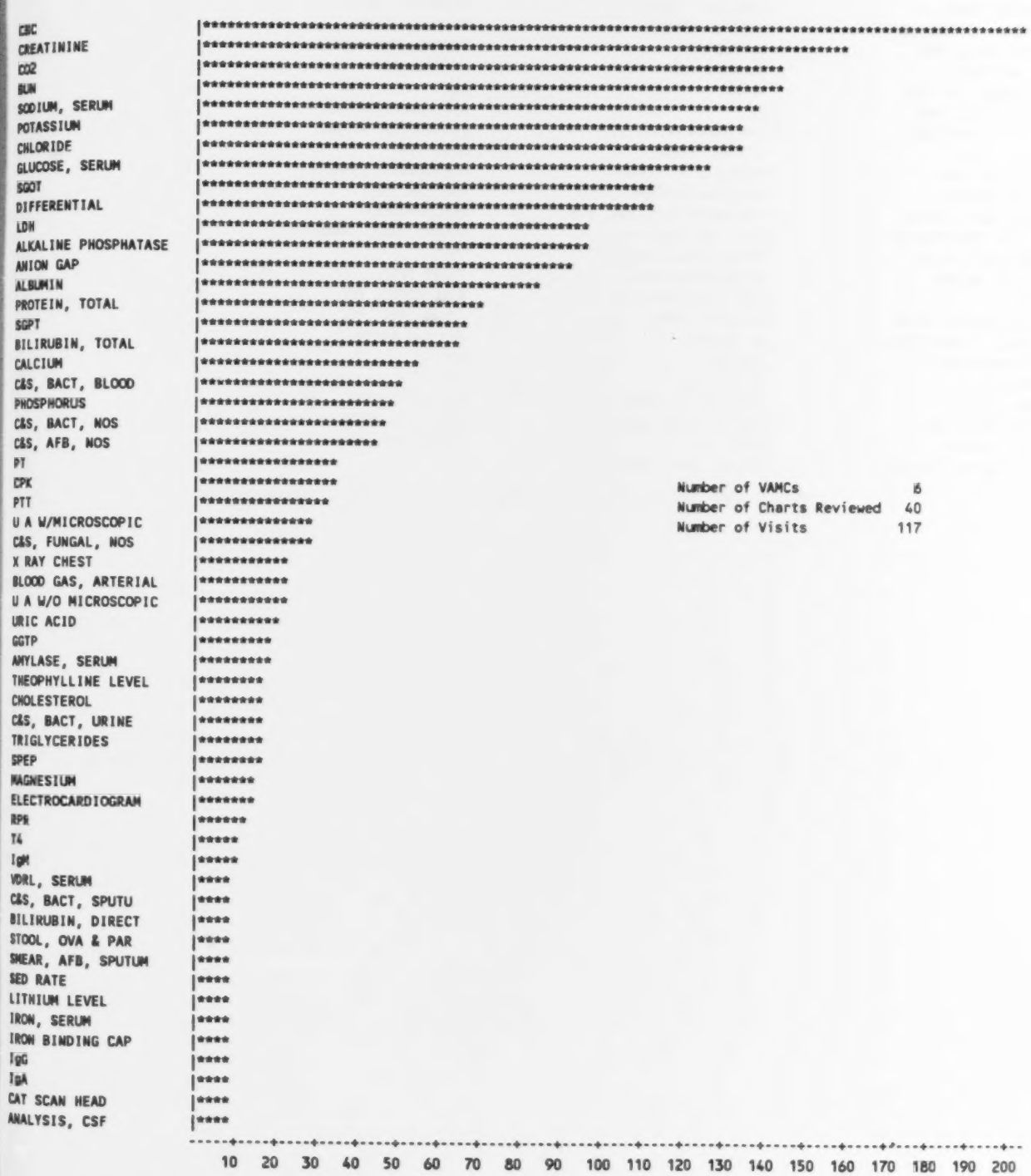
ARC (lymphadenopathy)

The following have a frequency distribution of less than 10.

ELECTROCARDIOGRAM	AHA	ARTERIOGRAM, PULMONARY
CAT SCAN HEAD	BARIUM SWALLOW	BICARBONATE
C&S, BACT, STOOL	BLEEDING TIME	C&S, BACT, ULCER
C&S, BACT, URINE	C&S, CMV, CSF	C&S, FUNGUS, SPUTUM
SMEAR, AFB, SPUTUM	C&S, FUNGUS, WOUND	C&S, VIRAL, NOS
SMEAR, AFB, NOS	C&S, VIRAL, SPUTUM	CAT SCAN NOS
HIV TITER	CAT SCAN PELVIS	CYTOLOGY EFFUSION NOS
MB profile	FREE THYROXIN INDEX	HAV IgM
CPK-MB	HBcAb	HEMAGGLUTININS
C&S, FUNGAL, NOS	IgA	IgG
BLOOD GAS, ARTERIAL	IgM	LUNG, BX
ACID PHOSPHATASE	MMPI	MONO TEST
VDRL, SERUM	PARASITE, FECES	PARASITES, NOS
T-LYMPH CELL RAT	PHEUMATOID FACTOR	SEROLOGY, VIRAL
SPEP	SKIN TEST MUMPS	SKIN, BX
ECHOCARDIOGRAM	SMEAR, FUNGUS, NOS	SMEAR, GRAM, SPUTUM
C&S, AFB, SPUTUM	STOOL, LEUKOCYTES	SUITURE REMOVAL
X RAY CLAVICLE	T P A 6 RATIO	TOMOGRAM, NOS
LUMBAR PUNCTURE	TOXOPLASMOSIS	TSH
HBsAg	WESTERN BLOT	X RAY FINGER
HBsAb	X RAY HIP	X RAY KUB
DRUG SCREEN	X RAY SKULL	X RAY SPINE
CELL CT, CSF	ANALYSIS, CSF	B12, SERUM
C&S, BACT, SPUTUM	C&S, BACT, CSF	CAT SCAN ABDOMEN
BILIRUBIN, INDIRECT	FERRITIN, SERUM	FOLIC ACIT, RBC
VANCOMYCIN LEVEL	MAGNESIUM	PROTEIN, CSF
T4	RENIN PLASMA	SMEAR, GRAM, NOS
SKIN TEST AFB	STOOL, OVA & PAR	TYPE & CROSSMATCH
RPR	T3	X RAY SHOULDER
RETICULOCYTE COUNT	BRONCHOSCOPY, BX	CRYPTOCAg, NOS
LIPIDS, SERUM	ELECTROLYTES URINE	GI SERIES
IRON, SERUM	IRON BIND CAPACITY	

ARC Without Major Opportunistic Infection or Carcinoma

PRIMARY DIAGNOSIS - ARC WITHOUT MAJOR OPPORTUNISTIC INFECTION OR CARCINOMA
MOST FREQUENT TESTS REQUESTED FOR TREATMENT OF ARC
PATIENT'S CONDITION - UNSTABLE
1987



Number of VAMCs	15
Number of Charts Reviewed	40
Number of Visits	117

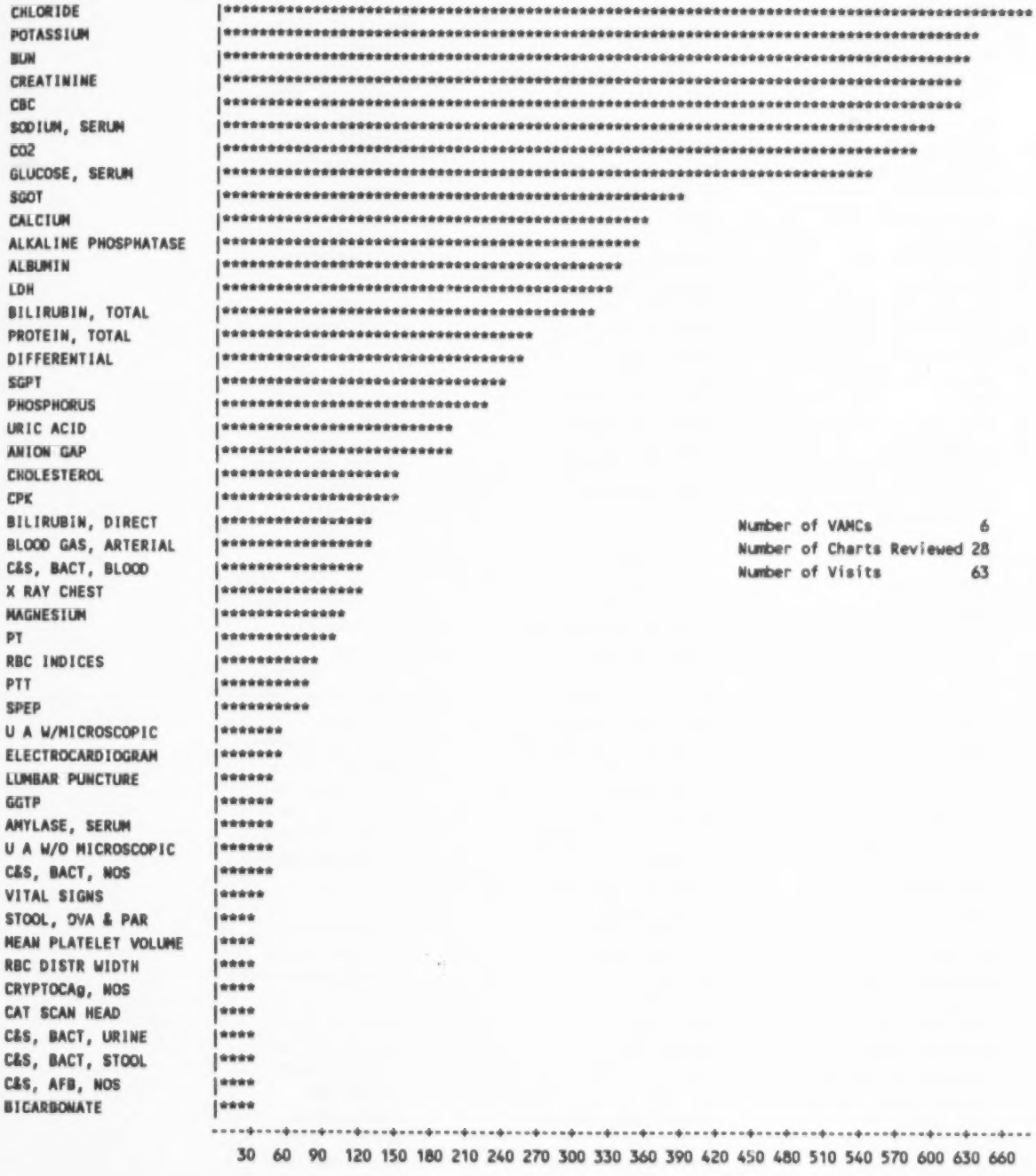
ARC without major opportunistic infection or Carcinoma

The following have a frequency distribution of less than 10.

RBC MORPHOLOGY
HBsAg
FERRITIN, SERUM
ELECTROLYTES URINE
URINE, 24HR
SMEAR, FUNGUS, NOS
CRYPTOCAg, NOS
X RAY KUB
T-LYMPH CELL RAT
PARASITES, NOS
LUMBAR PUNCTURE
HIV TITER
GALLIUM SCAN
DRUG SCREEN
C&S, BACT, STOOL
BLOOD TRANSFUSION
AMYLASE, URINE
X RAY ABDOMEN
T3
TOX SCREEN, URINE
STOOL, LEUKOCYTES
SIGMOIDOSCOPY
PCP STAIN
HB profile
C&S, BACT, GC
B12, SERUM
BILIRUBIN, INDIRECT
ANA
BONE MARROW
C&S, CRYPTO, STOOL
CAROTENE
CORTISOL, SERUM
DIGOXIN LEVEL
ENDOSCOPY
GLUCOSE, CSF
HBcAB
VP
LDH ISOENZYMES
LIPASE, SERUM
OSMOLARITY, SERUM
PROCAINMIDE LEVEL
PULMONARY FUNCTION, NOS
SKIN TEST AFB
STOOL, OCCULT BLOOD
ULTRASOUND RENAL
C&S, AFB, URINE
ECHOCARDIOGRAM
GI SERIES
HBcIgM
IRON PANEL
NUCLTIDE THYROID SCAN
RETICULOCYTE COUNT
SKIN, BX
SMEAR, GRAM, SPUTUM
BODY FLUID EXAM
BRONCHOSCOPY, BX
C&S, VIRAL, NOS
COLONOSCOPY
CRYOGLOB, SERUM
EB VIRUS TITER
ESOPHGASTDUODSCOPY
HAPTOGLOBIN
IgD
IVP, HYPERTENSIVE
LEUKOCYTES, URINE
MONO TEST
OSMOLARITY, URINE
PROTEIN, CSF
RENIN PLASMA
SMEAR, GRAM, STOOL
TSH
X RAY SKULL
CELL COUNT, CSF
FOLIC ACID, RBC
HAV IgG PANEL
HbsAB
MHA-TP
PROTEIN, URINE
SEROLOGY, VIRAL
SMEAR, AFB, NOS

AIDS With Major Opportunistic Infection or Carcinoma

PRIMARY DIAGNOSIS - AIDS WITH MAJOR OPPORTUNISTIC INFECTION OR CARCINOMA
INCLUDING KARPOSI'S SARCOMA
MOST FREQUENT TESTS REQUESTED FOR TREATMENT OF AIDS
PATIENT'S CONDITION - UNSTABLE
1987



Number of VAMCs	6
Number of Charts Reviewed	28
Number of Visits	63

AIDS WITH MAJOR OPPORTUNISTIC INFECTION OR CARCINOMA INCLUDING KARPOSI'S SARCOMA CONTINUED

The following tests had a frequency distribution of less than 30.

RBC MORPHOLOGY
C&S, FUNGAL, NOS
ANALYSIS, CSF
C&S, BACT, SPUTUM
SMEAR, AFB, NOS
ILEOSTOMY CARE
BLOOD TRANSFUSION
PROTEIN, CSF
BRONCHOSCOPY, NOS
FOLIC ACID, RBC
B12, SERUM
TYPE & CROSSMATCH
BRONCHOSCOPY, BX
PHENOBARBITAL LEVEL
IRON, SERUM
IRON BINDING CAP
GLUCOSE, CSF
ELECTROLYTES URINE
RETICULOCYTE COUNT
NEUTROPHILS
SMEAR, AFB, SPUTUM
RPR
MONO TEST
LARYNGOSCOPY
STOOL, OCCULT BLOOD
GI SERIES
X RAY ABDOMEN
C&S, BACT, CSF
T4
TRIGLYCERIDES
EOSINOPHILS
ECHOCARDIOGRAM
DILANTIN LEVEL
VDRL, SERUM
SMEAR, GRAM, STOOL
OSMOLARITY, SERUM
NODE BX, NOS
HBsAg
GENTAMICIN LEVEL
GALLIUM SCAN
CAT SCAN ABDOMEN
C&S, FUNGUS, SPUTUM
BONE MARROW
BANDS
URINE VOLUMES
OVALOCYTES
NEUROLOGIC EXAM
INTUBATION
FERRITIN, SERUM
CORTISOL, SERUM
CHEMOTHERAPY ABDOMEN
CENTRAL VENOUS PRESSURE
CELL COUNT, CSF
C&S, AFB, SPUTUM
BARIUM SWALLOW
ACID PHOSPHATASE

ALPHA-FETOPROTEIN
BARIUM ENEMA
C&S, BACT, GC
C&S, BACT, PLEURAL
C&S, CMV, CSF
C&S, MYCOPLASMA
CAT SCAN NOS
CATHETER,PULMONARY ARTERY
CRYPTOC AB, CSF
CYTOLOGY, ASCITIC FLUID
DUODENAL, BX
ENEMA, OIL RETENTION
GASTRIC ANALYSIS
HBsAb
IgA
LACTATE BLOOD
MALARIA SMEAR
MUGA SCAN, NOS
NEEDLE ASPIRATE, BX
RECTAL TUBE
SINUS SERIES
SMEAR, AFB, BLOOD
SMEAR, AFB, URINE
SONOGRAM, ABDOMEN
SWAN GANZ CATHETER
TITER MYCOPLASMA
ULCER, BX
VDRL, CSF
X RAY, MOUTH
X RAY, SKULL
ARTERIAL LINE
CYTOLOGY EFFUSION, NOS
ENEMA, TAP H20
HAPTOGLOBIN
MYELOGRAM, LUMBAR
OSMOLARITY, CALCIUM
PULMONARY FUNCTION, NOS
RENIN PLASMA
SIGMOIDOSCOPY
SMEAR, AFB, CSF
SURGICAL DEBRI DECUB
THYROXINE
VIRAL AB TITER, NOS
X RAY, SPINE
C&S, CMV, BLOOD
CAT SCAN NECK
CPK-MB
HB profile
IRON PANEL
NORMOCYTES
PARASITES, NOS
SED RATE
SMEAR, GRAM, SPUTUM
X RAY, KUB
ACID PHOSPHATASE
C&S, AFBN SPUTUM

AMIKACIN LEVEL
C&S, AFB, STOOL
C&S, BACT, PENIS
C&S, BACT, WOUND
C&S, FUNGAL, CRYPTO, STOOL
C&S, VIRAL, NOS
CAT SCAN SPINE
CHEST TUBE INSERT
CRYPTOC AB, SERUM
CYTOLOGY, NOS
ENDOSCOPY W/BX
FOLEY INSERTION
HBcAB
HIV TITER
IgC
LDH ISOENZYMES
MHA-TP
MYELOGRAM
NITRO THERAPY TEST
RECTUAL, BX
SKIN TEST AFB
SMEAR, AFB, NODE
SMEAR, GRAM, NOS
STOOL, LEUKOCYTES
THYROID ECHOGRAPH
UGI SERIES W/SBF
URINE, 24HR
X RAY, HAND
X RAY, SINUS
ALCOHOL LEVEL, BLOOD
C&S, SPINAL FLUID
DRUG SCREEN
FIBROGEN
KETONES, SERUM
NASAL GASTRIC ASPIRATE
PCP STAIN
RADIATION THERAPY
SEROLOGY, VIRAL
SMALL BOWEL, BX
STOOL, FAT STAIN
T-LYMPH CELL RAT
ULTRASOUND ABDOMEN
X RAY, HIP
BASOPHILS
CAT SCAN CHEST
CAT SCAN PELVIS
ELECTROENCEPHALOGRAM
IgM
LUNG, BX
OSMOLARITY, URINE
PROTEIN, URINE
SICKLE TEST
TOXOPLASMOSIS
ACETONE, SERUM
BARIUM SMALLOW
CELL COUNT, CSF

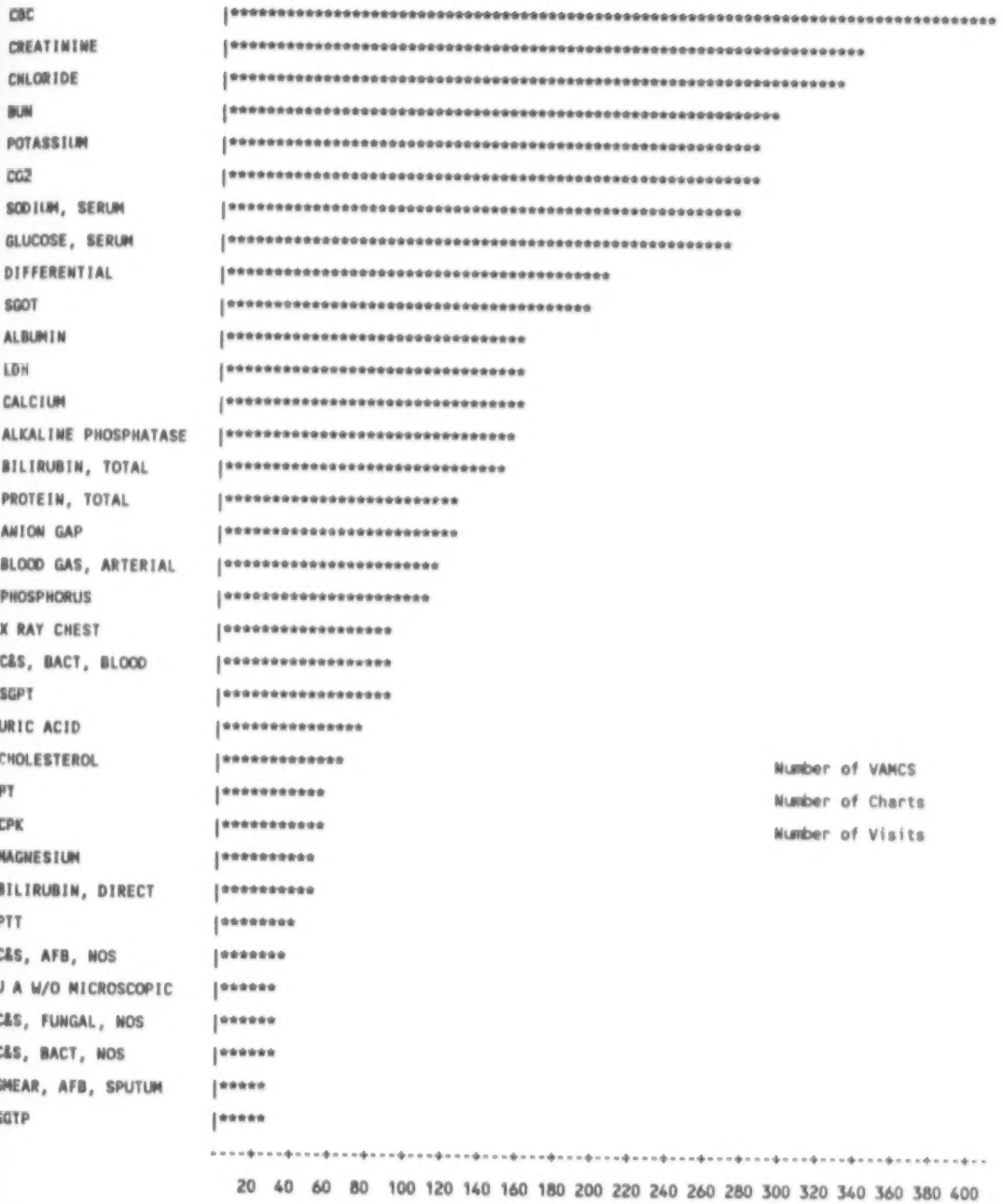
PCP

PRIMARY DIAGNOSIS - PCP

MOST FREQUENT TESTS REQUESTED FOR TREATMENT OF AIDS

PATIENT'S CONDITION - UNSTABLE

19879



Number of VAMCS	6
Number of Charts	46
Number of Visits	82

PCP

The following tests have a frequency distribution of less than 20.

ELECTROCARDIOGRAM
AMYLASE, SERUM
C&S, BACT, URINE
BRONCHOSCOPY, NOS
SPEP
CAT SCAN HEAD
RBC MORPHOLOGY
STOOL, OVA & PAR
C&S, BACT, STOOL
BRONCHOSCOPY, BX
ELECTROLYTES URINE
C&S, BACT, SPUTUM
U A W/MICROSCOPIC
CRYPTOCAg, NOS
VDRL, SERUM
FOLIC ACID, RBC
LUMBAR PUNCTURE
IgG
ANALYSIS, CSF
DILANTIN LEVEL
CORTISOL, SERUM
PARASITES, NOS
IgA
GALLIUM SCAN
ECHOCARDIOGRAM
X RAY KUB
SMEAR, AFB, NOS
SKIN TEST AFB
IgM
B12, SERUM
BLOOD TRANSFUSION
SED RATE
RPR

ALPHA-FETOPROTEIN
ARTERIAL LINE
C&S, AFB, SPUTUM
C&S, MYCOPLASMA
CARBON MONOXIDE
CENTRAL VENOUS PRESSURE
CYTOLOGY, NOS
DRUG SCREEN
FIBRINOGEN
FT4:RIA
HIV TITER
INSULIN
MHA-TP
NORTRIPTYLINE
SKING TEST FUNGUS
SKIN, BX
T-LYMPH CELL RAT
T4
X RAY SHOULDER
X RAY SPINE
ELECTRON MICROSCOPY
HBcAB
IRON PANEL
RENIN PLASMA
SMEAR, GRAM, NOS
C&S, CMV, BLOOD
CARDIAC MONITORING
CRYOGLOB, SERUM
HEMODYNAMIC MONITORING
OSMOLARITY, URINE
STOOL, OCCULT BLOOD
BLEEDING TIME
PCP STAIN

AMITRIPTYLINE LEVEL
BONE SCAN
C&S, BACT, GC
C&S, VIRAL, NOS
CAT SCAN CHEST
COMPLEMENT, SERUM
DIGOXIN LEVEL
FERRITIN, SERUM
FOLLICLE STIM HORMONE
HBcAb
HOLTER MONITORING
LACTATE BLOOD
NASAL GASTRIC TUBE
PAP SMEAR SPUTUM
SKIN TEST MUMPS
SMEAR, GRAM, SPUTUM
TOXOPLASMOSIS
ULTRASOUND ABDOMEN
X RAY SINUS
ZINC
HB PROFILE
HBsAb
IRON, SERUM
SIGMOIDOSCOPY
ACID PHOSPHATASE
C&S, FUNGUS, SPUTUM
CELL CT, CSF
HBsAG
IRON BINDING CAP
RETICULOCYTE COUNT
TRIGLYCERIDES
LEUKOCYTES, URINE

AIDS Death

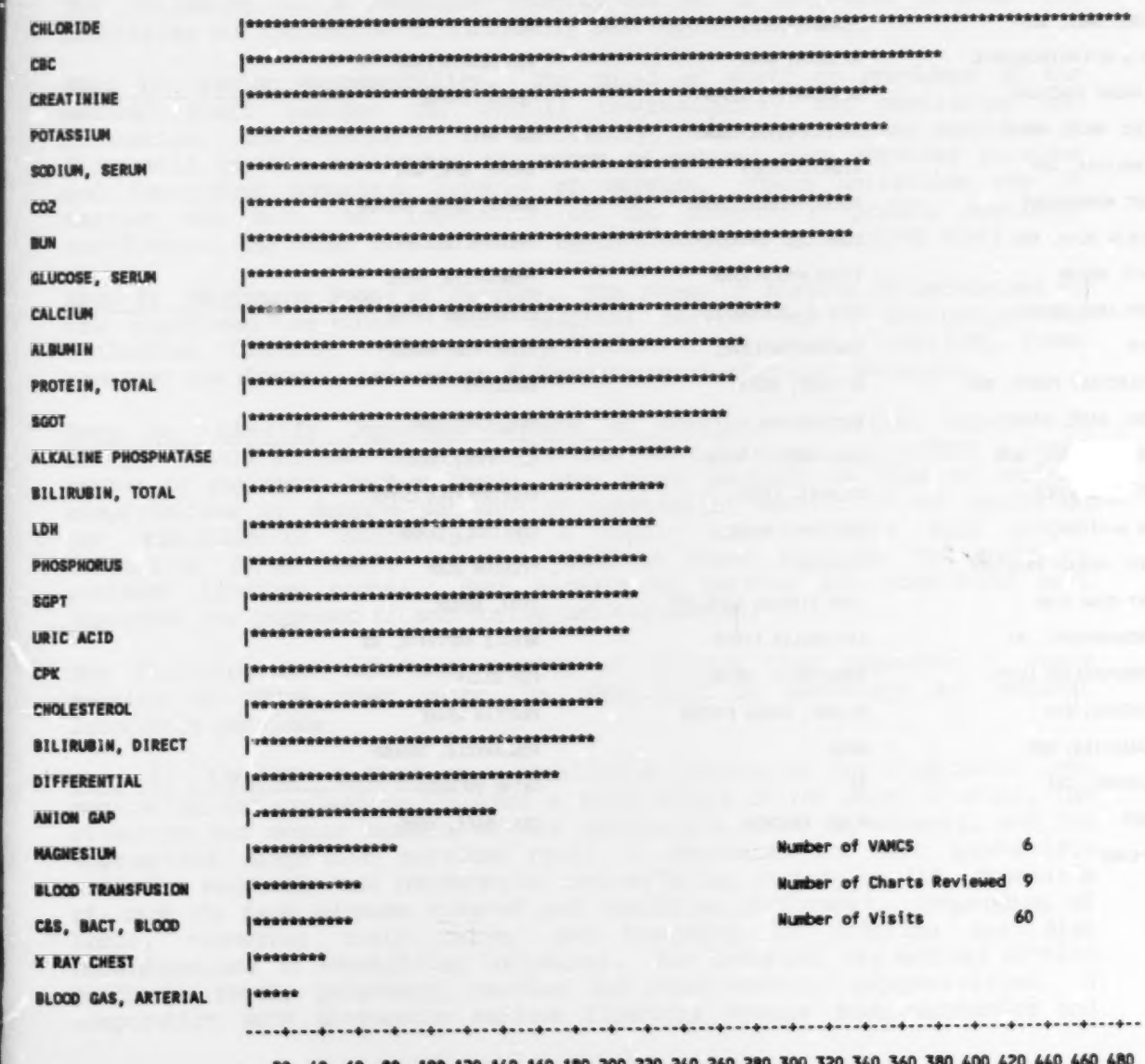
best copy available

PRIMARY DIAGNOSIS - AIDS DEATH

MOST FREQUENT TESTS REQUESTED FOR TREATMENT OF AIDS

PATIENT'S CONDITION - UNSTABLE

1987



Number of VAMCS 6

Number of Charts Reviewed 9

Number of Visits 60

AIDS DEATH

The following have a frequency distribution of less than 20.

PT	ACID PHOSPHATASE	ARTERIAL LINE
PTT	AUTOPSY	BARIUM ENEMA
ELECTROCARDIOGRAM	BONE SCAN	C&S, AFB, SPUTUM
U A W/MICROSCOPIC	C&S, CAMPYLOBA	C&S, VIRAL, NOS
C&S, AFB, NOS	CAT SCAN ABDOMEN	CAT SCAN PELVIS
C&S, FUNGAL, NOS	CAT SCAN THIGH	CPR
ECHOCARDIOGRAM	CRYOGLOB, SERUM	ELECTROENCEPHALOGRAM
STOOL, OVA & PAR	HBcAB	HBeAb
C&S, BACT, NOS	HBsAg	MRI
U A W/O MICROSCOPIC	MYCOLOGY BONE	NEUROLOGIC EXAM
LUMBAR PUNCTURE	OSMOLARITY, SERUM	RENIN PLASMA
C&S, BACT, URINE	RETICULOCYTE COUNT	SED RATE
ANALYSIS, CSF	SIGMOIDOSCOPY	SMEAR, AFB, NOS
RBC MORPHOLOGY	SMEAR, FUNGUS, NOS	SMEAR, GRAM, SPUTUM
FOLIC ACID, RBC	SWAN GANZ CATHETER	T-LYMPH CELL RAT
B12, SERUM	TITER MYCOPLASMA	TOBRAMYCIN, PEAK
AMYLASE, SERUM	TYPE & CROSSMATCH	ULTRASOUND THIGH
RPR	VANCOMYCIN LEVEL	VIRAL BONE MARROW
PULMONARY FUNCT, NOS	ACETONE, SERUM	ANOSCOPY
C&S, BACT, STOOL	BONE MORROW	C&S, BACT, CSF
BRONCHOSCOPY, NOS	C&S, BACT, SPUTUM	CRYPTOCAg, NOS
TRIGLYCERIDES	DILANTIN LEVEL	ELECTROLYTES URINE
HB profile	C&S, CMV, BLOOD	CORTISOL, SERUM
CENT VENOUS PRESSURE	FT4:RIA	GALLIUM SCAN
CAT SCAN HEAD	IRON BINDING CAPACITY	IRON, SERUM
BRONCHOSCOPY, BX	LEGIONELLA TITER	NEEDLE ASPIRATE, BX
THEOPHYLLINE LEVEL	OSMOLARITY, URINE	PCP STAIN
PROTEIN, CSF	PLASMA, FRESH FROZEN	PROTEIN URINE
PARASITES, NOS	SPEP	TOBRAMYCIN, TROUGH
GLUCOSE, CSF	T4	URINE VOLUMES
GGTP	X RAY ABDOMEN	C&S, BACT, YERS
CPK-MB		

SECTION V

METHOD FOR DESIGNING DIAGNOSTIC PATTERNS OF CARE

This section is intended to assist clinical physicians, laboratory, radiology, nuclear medicine physicians and other diagnostic service personnel in the design of their own monitoring and evaluation activities. The exercise includes such components as identifying important aspects of service, identifying indicators, establishing thresholds for evaluation, determining a methodology for collecting data, determining a methodology for evaluating care, taking actions to improve care, and reporting such activities to the organizationwide quality assurance program. This exercise may be used as an in-service tool by physicians or by quality assurance representatives.

The following is a detailed description of a step-wise process for monitoring and evaluation of laboratory test appropriateness.

Step 1: Assign Responsibility. The chief of staff or president of the medical staff assigns the overall responsibility for monitoring and evaluation. The director of the laboratory, radiology, nuclear medicine or diagnostic service delineates the scope of patient care services provided and identifies important aspects of service. These activities may be carried out with the cooperation of the hospital's quality assurance coordinator, the chief of staff, and appropriate quality clinical staff.

Step 2: Delineate Scope of Service. The scope of service is determined by its functional sections. Each hospital service has a monitoring and evaluation function, since the products of diagnostic activity (test results) are directly related to diagnostic or therapeutic decisions.

Step 3: Identify Important Aspects of Service. Important aspects of service should include those aspects that occur frequently or affect a large number of patients (high-volume): that place patients at risk of serious complications or deprive patients of substantial benefit if not performed (or administered) correctly, in a timely manner and/or with proper indication (high risk): or that tend to cause problems for staff or patients (problem prone). Such aspects of service are considered most important for purposes of monitoring and evaluation.

The following are important aspects of service that represent a cross section of those that might be identified by pathology and medical laboratory services.

Step 4: Identify Indicators. Identifying indicators for diagnostic test monitoring and evaluation involves a joint effort of the chief of staff, the directors and senior members of the appropriate staff departments, and the appropriate diagnostic services staff to determine the most appropriate medical, surgical, and psychiatric test-ordering strategies (ie, standards of care fo each disease treated and operation performed). Sequencing of tests, measuring their value, and frequency of ordering are also considerations in identifying indicators. For instance, the medical section heads in renal, pulmonary, cardiac and other medical subspecialties, in cooperation with diagnostic service directors develop test strategies and

expected outcomes that define appropriate care fo each disease that is treated in their section. These strategies are adapted for use as indicators with which the diagnostic service physicians monitor the quality and appropriateness of test ordering and other patient care services.

The importance of appropriate test selection to quality assurance (and cost effectiveness) is well understood. Providing a standard of medical care for specific hospital community assures that there will be agreement on the optimal strategy to be used for each disease process and provides a point of departure if a patient exhibits unusual manifestations of the suspected disease. Such standards also provide a protocol for less experienced house staff physicians to follow, based on agreement between the senior experienced subspecialists.

There are vast differences in test ordering practices between physicians due to place and time of training, geographic and other differences in practice and presence or absence of academic affiliation with a medical school. By using the following procedure, or a similar procedure, each hospital can design its own appropriate strategies and frequencies for test ordering. These strategies and frequencies can be adapted for use as indicators for monitoring and evaluation. Expected frequencies can be used to establish thresholds or evaluation for the indicators. These indicators and thresholds should be used in the monitoring and evaluation process.

The following procedure can be used to establish the test-ordering strategies for each disease and operation.

The physician subspecialists select the disease categories treated in their sections. To be effective as a quality assurance tool, a strategy for all diseases treated in each section should be developed. The physicians then develop identifiable test-ordering standards for each disease and/or operation selected based on current medical literature, medical textbooks, information from nationally recognized medical authorities or scientific bodies, or other authoritative sources. Some groups may prefer to convene a seminar or conference to discuss the range of opinion that will be found in the hospital regarding the appropriate tests required for each disease. Others may choose to adopt and use the sample format that appears in Figures 1 & 2, pages 189-192. The sample format also includes a column (11) for frequency of test orders, which is important to include as a quality assurance measure. It is often difficult for physicians to agree on test-ordering frequency; the choices noted in column 11 can be helpful as a basis for reaching consensus.

After the clinical section leaders have computerized and graphed their appropriate strategies and frequencies (see Figure 3 - 5, pages 193-195 agreed on by colleagues and the service chiefs, the directors of diagnostic services review these tests to determine their compatibility with existing methods and their degree of sensitivity and specificity related to the specific disease and/or operative procedure. In some cases, the diagnostic service physicians may be able to augment the list with more specific test choices or may indicate that a certain test is less valuable than others in making a diagnosis or in monitoring a therapeutic process (eg, a drug level for which a methodology has not yet been perfected).

Figure 1

STABLE

DIAGNOSTIC PATTERNS OF CARE (DPC) - SURVEY FORM

(1) VAMC STATION NUMBER: 600 (2.) MEDICAL SCHOOL AFFILIATION UC Irvine 113.1721

(3.) SPECIALTY 16 Medical Onc (4.) YEARS IN SPECIALTY 19

(5.) DRG (82) RESPIRATORY NEOPLASMS

(6.) PRINCIPAL DIAGNOSIS: 1622-29;1653-1970;2391

(7.) PATIENT STATUS: STABLE

(7.A) Dx: CARCINOMA OF THE LUNG

CASE STUDY #824: A 58-year-old man has been a heavy cigarette smoker (80 pack a year) and has had a long standing "morning cough." Following two days of blood streaking of his sputum last week, a chest x-ray was obtained which showed a right hilar mass. He is seen in the ER for a chief complaint of "shortness of breath." What tests and procedures will you order to confirm your clinical impression of bronchogenic carcinoma and begin this therapy? What tests will you order to monitor your therapy?

LEGEND OF CODES

Code	VALUE OF TEST	Code	FREQUENCY OF TESTS
1.	Highly necessary	1.	Once daily for one day only
2.	Moderately necessary	2.	Once daily for 2-3 days
3.	Somewhat necessary	3.	Once daily for 3-5 days
4.	Not necessary	4.	Once daily for >5 days
		5.	Other (enter own freq/days)
		6.	P.R.N. only
		7.	Once only on admission

DIRECTIONS: Fill in the sections below (8-10-11-12) based on the diagnosis in (7.A) above.

(8.) DIAGNOSTIC TEST(S) NEEDED (Do NOT use profile or instrument names for lab tests)	(9.) PURPOSE OF TEST	(10.) VALUE OF TEST CODE	(11.) FREQUENCY CODE	(12.) PHYSICIAN'S DRUG THERAPY Your Drug(s) of Choice Write in your drug(s) of Choice
1. Pulmonary Function Test		1	7	1. Surgery
2. Sputum Cytology		1	7	2. Radiation Therapy
3. Bronchoscopy		1	7	3. Chemotherapy
4. Percutaneous Needle BX	SCREENING	1	7	4.
5. Mediastinoscopy	ADMISSION	1	7	5.
6. Diagnostic Thoracotomy	ONLY	1	7	6.
7. Cat Scan Chest		1	7(q-4mos)	7.
8. X-Ray Chest	(DO	1	7(q-4mos)	8.
9.	NOT			9.
10.	ENTER			10.
11.	DATA			11.
12.	IN THIS			12.
13.	COLUMN)			13.
14.				14.
15.				15.

COMMENTS:

(8.) #3 if #2 not diagnostic
#4 if #3 not diagnostic
#5 if #4 not diagnostic
#6 if #5 not diagnostic

(12.) Surgery if feasible
radiation therapy if no surgery
chemotherapy if small cell lung cancer

#1, #5, and #7 to determine type of therapy (no surgery of Mediast. ⊕)

#7 and #8 to monitor results of treatment

Revised 9/84 EMT/MCC

STABLE

DIAGNOSTIC PATTERNS OF CARE (DPC) - SURVEY FORM

(1) VAMC STATION NUMBER: ____ (2.) MEDICAL SCHOOL AFFILIATION _____ 113.1721

(3.) SPECIALTY _____ (4.) YEARS IN SPECIALTY _____

(5.) DRG (82) RESPIRATORY NEOPLASMS

(6.) PRINCIPAL DIAGNOSIS: 1622-29;1653-1970;2391

(7.) PATIENT STATUS: STABLE

(7.A) Dx: CARCINOMA OF THE LUNG

CASE STUDY #824: A 58-year-old man has been a heavy cigarette smoker (80 pack a year) and has had a long standing "morning cough." Following two days of blood streaking of his sputum last week, a chest x-ray was obtained which showed a right hilar mass. He is seen in the ER for a chief complaint of "shortness of breath." What tests and procedures will you order to confirm your clinical impression of bronchogenic carcinoma and begin this therapy? What tests will you order to monitor your therapy?

LEGEND OF CODES

Code VALUE OF TEST
1. Highly necessary
2. Moderately necessary
3. Somewhat necessary
4. Not necessary

Code FREQUENCY OF TESTS
1. Once daily for one day only
2. Once daily for 2-3 days
3. Once daily for 3-5 days
4. Once daily for >5 days
5. Other (enter own freq/days)
6. P.R.N. only
7. Once only on admission

DIRECTIONS: Fill in the sections below (8-10-11-12) based on the diagnosis in (7.A) above.

(8.) DIAGNOSTIC TEST(S) NEEDED (Do NOT use profile or instrument names for lab tests)	(9.) PURPOSE OF TEST	(10.) VALUE OF TEST CODE	(11.) FREQUENCY CODE	(12.) PHYSICIAN'S DRUG THERAPY Your Drug(s) of Choice Write in your drug(s) of Choice
1.				1.
2.				2.
3.				3.
4.	SCREENING			4.
5.	ADMISSION			5.
6.	ONLY			6.
7.				7.
8.	(DO			8.
9.	NOT			9.
10.	ENTER			10.
11.	DATA			11.
12.	IN THIS			12.
13.	COLUMN)			13.
14.				14.
15.				15.

COMMENTS:

Revised 9/84 EMT/MCC

Figure 2

DIAGNOSTIC PATTERNS OF CARE (DPC) - SURVEY FORM

(1) VAMC STATION NUMBER: 600 (2.) MEDICAL SCHOOL AFFILIATION UC Irvine 113.1076

(3.) SPECIALTY 39 Endo (4.) YEARS IN SPECIALTY 9

(5.) DRG (294-295) DIABETES >=36;DIABETES 0-35

(6.) PRINCIPAL DIAGNOSIS: 25000 DIABETES UNCOMPL ADULT

(7.) PATIENT STATUS: ADMIT STABLE

(7.A) Dx: DIABETES MELLITUS, UNCOMPLICATED

CASE STUDY #294-295-1: A 52-year-old woman is referred for evaluation of 4+ glycosuria, noted during the course of a routine gyn exam. There is an equivocal history of polyuria, and no family history of diabetes mellitus. The patient is 5'5" tall and weights 178 pounds. There are no other major findings on physical examination. What screening tests and what procedures will you order to confirm your clinical impression of uncomplicated Diabetes Mellitus?

LEGEND OF CODES

Code	VALUE OF TEST	Code	FREQUENCY OF TESTS
1.	Highly necessary	1.	Once daily for one day only
2.	Moderately necessary	2.	Once daily for 2-3 days
3.	Somewhat necessary	3.	Once daily for 3-5 days
4.	Not necessary	4.	Once daily for >5 days
		5.	Other (enter own freq/days)
		6.	P.R.N. only
		7.	Once only on admission

DIRECTIONS: Fill in the sections below (8-10-11-12) based on the diagnosis in (7.A) above.

(8.) DIAGNOSTIC TEST(S) NEEDED (Do NOT use profile or instrument names for lab tests)	(9.) PURPOSE OF TEST	(10.) VALUE OF TEST CODE	(11.) FREQUENCY CODE	(12.) PHYSICIAN'S DRUG THERAPY Your Drug(s) of Choice Write in your drug(s) of Choice
1. Serum Glucose		1	3	1. Glyburide
2. Serum Sodium		1	7	2. Insulin
3. Serum Potassium		1	7	3.
4. Serum CO_2	SCREENING	1	7	4.
5. Serum Creatinine	ADMISSION	1	7	5.
6. Serum BUN	ONLY	1	7	6.
7. Urinalysis		1	7	7.
8. EKG	(DO	2	7	8.
9. X-Ray Chest	NOT	3	7	9.
10. Hemoglobin A_1	ENTER	3	7	10.
11. CBC	DATA	3	7	11.
12. Triglycerides	IN THIS	3	7	12.
13. Cholesterol	COLUMN)	3	7	13.
14.				14.
15.				15.

COMMENTS:

Revised 9/84 EMT/MCC

DIAGNOSTIC PATTERNS OF CARE (DPC) - SURVEY FORM

(1) VAMC STATION NUMBER: _____ (2.) MEDICAL SCHOOL AFFILIATION_____ 113.1076

(3.) SPECIALTY _____ (4.) YEARS IN SPECIALTY _____

(5.) DRG (294-295) DIABETES >=36;DIABETES 0-35

(6.) PRINCIPAL DIAGNOSIS: 25000 DIABETES UNCOMPL ADULT

(7.) PATIENT STATUS: ADMIT STABLE

(7.A) Dx: DIABETES MELLITUS, UNCOMPLICATED

CASE STUDY #294-295-1: A 52-year-old woman is referred for evaluation of 4+ glycosuria, noted during the course of a routine gyn exam. There is an equivocal history of polyuria, and no family history of diabetes mellitus. The patient is 5'5" tall and weights 178 pounds. There are no other major findings on physical examination. What screening tests and what procedures will you order to confirm your clinical impression of uncomplicated Diabetes Mellitus?

LEGEND OF CODES

Code	VALUE OF TEST	Code	FREQUENCY OF TESTS
1.	Highly necessary	1.	Once daily for one day only
2.	Moderately necessary	2.	Once daily for 2-3 days
3.	Somewhat necessary	3.	Once daily for 3-5 days
4.	Not necessary	4.	Once daily for >5 days
		5.	Other (enter own freq/days)
		6.	P.R.N. only
		7.	Once only on admission

DIRECTIONS: Fill in the sections below (8-10-11-12) based on the diagnosis in (7.A) above.

(8.) DIAGNOSTIC TEST(S) NEEDED (Do NOT use profile or instrument names for lab tests)	(9.) PURPOSE OF TEST	(10.) VALUE OF TEST CODE	(11.) FREQUENCY CODE	(12.) PHYSICIAN'S DRUG THERAPY Your Drug(s) of Choice Write in your drug(s) of Choice
1. _____		_____	_____	1. _____
2. _____		_____	_____	2. _____
3. _____		_____	_____	3. _____
4. _____	SCREENING	_____	_____	4. _____
5. _____	ADMISSION	_____	_____	5. _____
6. _____	ONLY	_____	_____	6. _____
7. _____		_____	_____	7. _____
8. _____	(DO	_____	_____	8. _____
9. _____	NOT	_____	_____	9. _____
10. _____	ENTER	_____	_____	10. _____
11. _____	DATA	_____	_____	11. _____
12. _____	IN THIS	_____	_____	12. _____
13. _____	COLUMN)	_____	_____	13. _____
14. _____		_____	_____	14. _____
15. _____	_____	_____	_____	15. _____

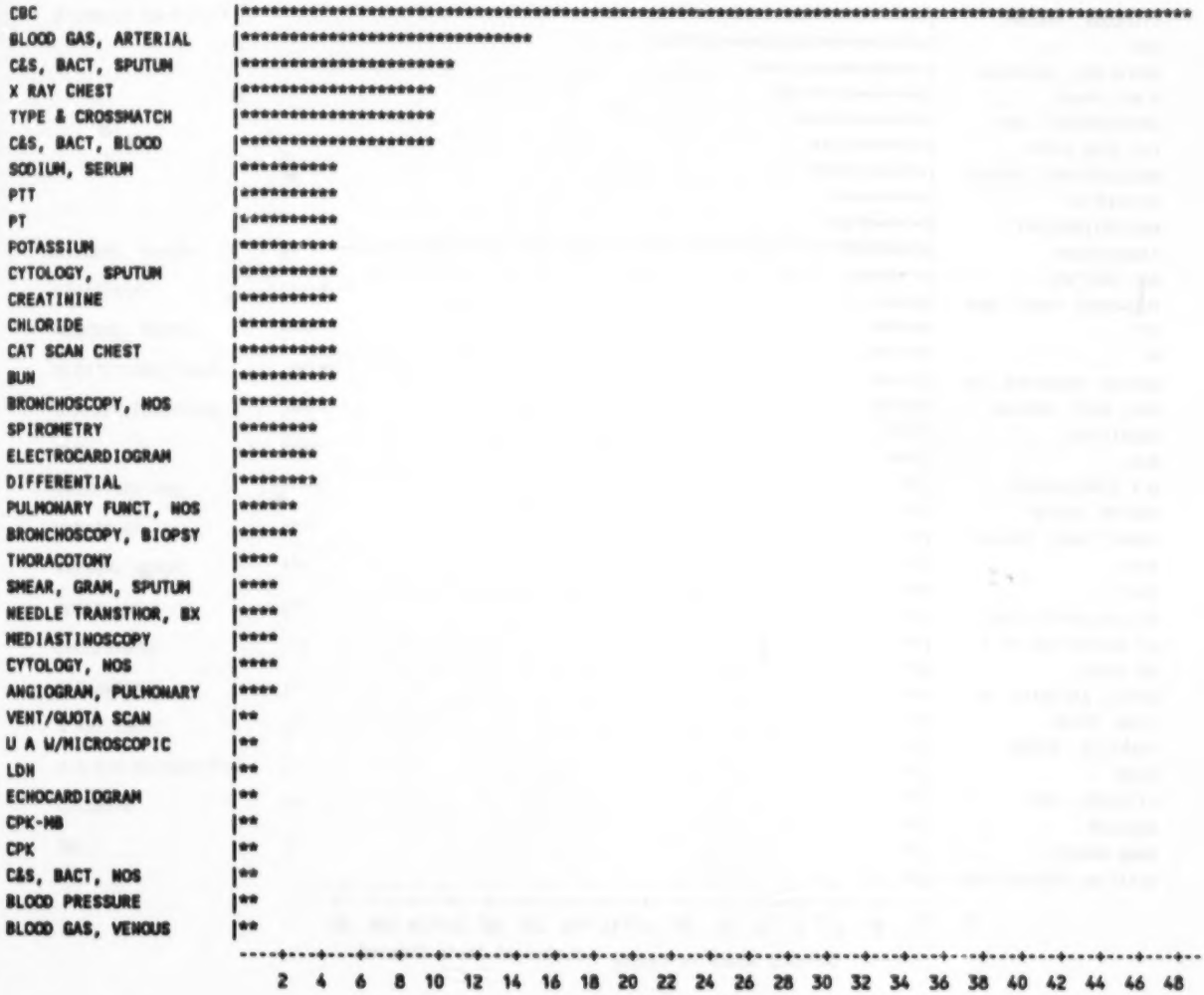
COMMENTS:

Revised 9/84 ENT/MCC

Figure 3

LONG BEACH VA MEDICAL CENTER
PRIMARY DIAGNOSIS - RESPIRATORY NEOPLASMS (CARCINOMA OF THE LUNG PRIMARY)
PATIENT'S CONDITION - UNSTABLE
DECEMBER 1985

CASE STUDY: A 58-year old man has been a heavy cigarette smoker (80 pack a year) and has had a long standing "morning cough." Following two days of blood streaking of his sputum last week, a chest x-ray was obtained yesterday which showed a right hilar mass. Two days ago you admitted him for bright red hemoptysis, hypotension and anemia. Despite your treatment for his bleeding and hypotension, he continues to be febrile (103.5F). You have appropriately prescribed medication and procedures to treat these problems. What tests will you order to monitor his progress.



The larger frequency distribution of CBCs is due primarily to the fact that of the 7 participating physicians: 2 of them ordered CBCs QD for 3-5 days on all three unstable case studies, another physician ordered them QD for 3-5 days on two of the unstable case studies, while the rest of the physicians ordered them QD for 1-3 days on one or more case studies.

Figure 4

LONG BEACH VA MEDICAL CENTER
PRIMARY DIAGNOSIS - RESPIRATORY NEOPLASMS (CARCINOMA OF THE LUNG PRIMARY)
PATIENT'S CONDITION - STABLE
DECEMBER 1988

CASE STUDY: A 58-year-old man has been a heavy cigarette smoker (80 pack a year) and has had a long standing "morning cough." Following two days of blood streaking of his sputum last week, a chest x-ray was obtained which showed a right hilar mass. He is seen in the ER for a chief complaint of "shortness of breath." What tests and procedures will you order to confirm your clinical impression of bronchogenic carcinoma and begin this therapy? What tests will you order to monitor your therapy?

Figure 5

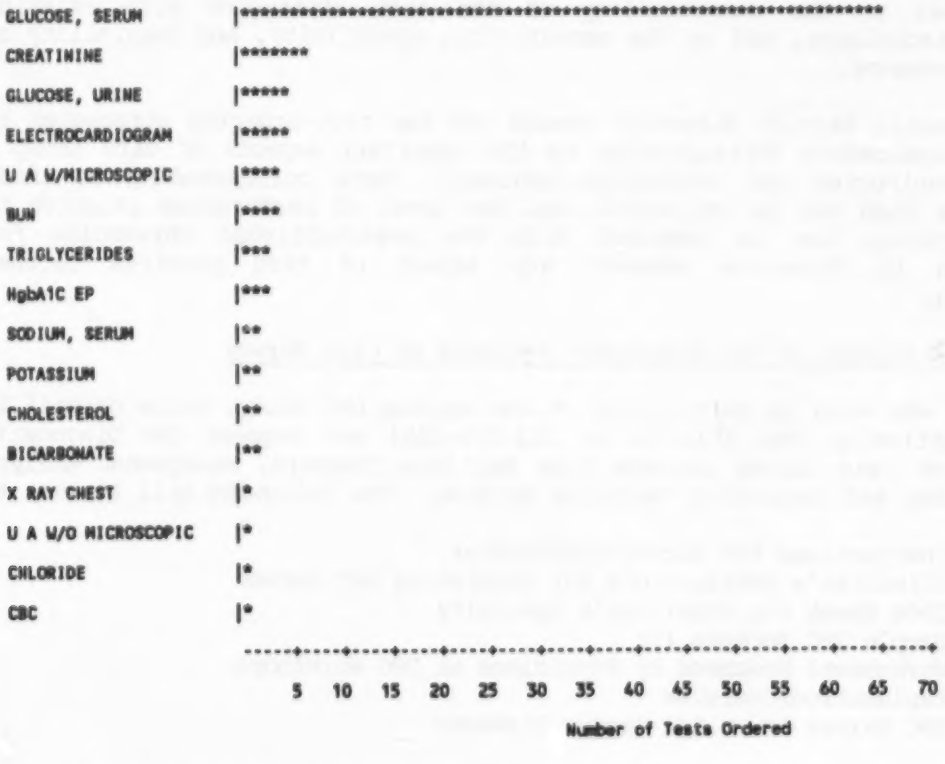
LONG BEACH VA MEDICAL CENTER

PRIMARY DIAGNOSIS - DIABETES MELLITUS UNCOMPLICATED

PATIENT'S CONDITION - STABLE

DECEMBER 1988

CASE STUDY: A 52-year-old woman is referred for evaluation of 4+ glycosuria, noted during the course of a routine gyn exam. There is an equivocal history of polyuria, and no family history of diabetes mellitus. The patient is 5'5" tall and weights 178 pounds. There are no other major findings on physical examination. What screening tests and what procedures will you order to confirm your clinical impression of uncomplicated Diabetes Mellitus?



The large frequency distribution of Glucose, Serum is because one physician ordered it

4 times a day time the average length of stay (11 days).

When an acceptable list of tests and diseases or operations has been agreed on by the clinical and laboratory physicians most experienced in their use, performance, and interpretation, the chief medical administrative officer of the hospital brings the test strategy lists to the attention of the entire medical staff at a council or clinical executive board meeting, or convenes a conference or seminar to advise the staff of the newly proposed test-ordering strategies and frequencies. The staff then votes to accept or amend the list. If accepted, this concurrence is recorded in the minutes of the meeting, and the list is made available (in print or on the computer system) for use by all physicians and other authorized to order tests.

If the new strategies are not accepted, the chief medical administrative officer works with the clinical and diagnostic service staff physicians to resolve any differences and find acceptable strategies. Once acceptable strategies are found, the medical staff should again vote on the acceptability of the strategies for general use in the hospital.

In some small hospitals, the clinical staff may be limited to service chiefs. In these circumstances, the service chiefs may decide their priorities based on standards of care in their own medical community and on medical scientific references. The clinical service chief should communicate these choices to the hospital's quality assurance coordinator. The diagnostic service directors should also be advised of these choices and should seek outside consultation from clinical pathologists who can advise him or her on the compatibility of the test strategies with existing methods, techniques, and on the sensitivity, specificity, and feasibility of test performance.

The diagnostic service directors should use the test-ordering strategies to identify indicators corresponding to the important aspects of care (step 3 in the monitoring and evaluation process). Data corresponding to these indicators then can be collected, and the level of performance relative to the indicators can be compared with the preestablished thresholds for evaluation to determine whether any aspect of care requires further evaluation.

How to Participate in the Diagnostic Patterns of Care Survey

For those who wish to participate in the ongoing DPC study, write or call VA Central Office at FTS 373-2348 or 202-233-2464 and request the Diagnostic Patterns of Care Survey package from Marilynn Chambers, Management Analyst in Pathology and Laboratory Medicine Service. The following will be sent to you:

1. Instructions for Survey Coordinator
2. Clinician's Instructions for Completing DPC Format
3. Code Sheet for Physician's Specialty
4. Sample DPC Formats (2)
5. Worksheets Prepared by Physicians at DPC Workshops
6. Explanation/Overview
7. DPC Survey Forms for Chosen Diseases

IMPORTANT: If you provide a list of diseases you wish to study based on the diseases seen most frequently in your hospital, we will send you prepared survey forms for each disease you request from our file of over 110 diseases.

Computerized survey results similar to those in Figures 3 - 5 in this section will be returned to you when you return the completed survey forms. Data entry and collation will be performed by Pathology and Laboratory Medicine Service.

SECTION VI

Calculation of Costs for Diagnostic Test Choices

This section discusses a technique that can be used to calculate the costs for Diagnostic Patterns of Care protocols. These costs represent a substantial part of the total cost for a patient's hospital stay (40-60%); it is also important to be able to estimate how certain diseases will affect a hospital's overall costs more than others.

Diagnostic costs will be different in each hospital since no two hospitals have the same number and type of staff, salary structure (50-70% of a test's cost), the same diagnostic equipment or identical costs for supplies, reagents, film, etc. Therefore, each hospital needs to know how its costs are affected by its equipment configuration and purchasing practices.

Cost Accounting Technique

The basic method used to accumulate costs for diagnostic techniques is the Instrument Cost Accounting Technique (ICAT), developed by Pathology and Laboratory Medicine Service. Any diagnostic test whether or not it involves the use of an instrument, can be cost accounted using this method.

Figures 1 & 2 demonstrate the format used to accumulate test costs. There are basic aspects of costs that need to be identified, 1) labor costs (the most significant), 2) materials cost (reagents, supplies, film) and 3) indirect costs. The ICAT method considers all three, however indirect costs are more difficult to assess, and are usually estimated rather than calculated.

After costs have been accumulated for a test, and entered into cost calculation formulas, they are applied to the protocol of tests chosen for each specific disease. First, the hospital's clinical and diagnostic service physicians develop Diagnostic Patterns of Care, according to the method in Section V. After test choices are established and agreed upon, test cost data is applied to the Basic and Discriminatory Test categories, according to the formats presented in Figures 3 & 4. Once cost data is applied, diagnostic costs per day and/or diagnostic costs per hospitalization can be calculated for each disease studied.

Information on how to perform the cost accounting and cost calculation techniques can be obtained from E. M. Travers, M.D., Director, Pathology and Laboratory Medicine, Department of Veterans Affairs, 810 Vermont Avenue, N.W., Washington, D.C. 20420, (202)-233-2464.

Figure 1

EXAMPLES AND WORK SHEETS FOR MICROCOST ACCUMULATION

The work sheets that follow were designed to provide the reader with examples of actual cost accumulation work sheets completed in hospital laboratories.

I. TEST INSTRUMENT

Name: Blood Culture
Model number: 460
Manufacturer: Johnston Labs
Purchase price: $32,006
Life expectancy in years: 5
Annual maintenance cost: $1637
Site-preparation cost: N.A.
Evaluation period in days: 90
Starting date: 9/26/85
Completion date:

II. DIRECT TEST MATERIALS

Name of test/profile	Total no. tests/profiles	Per test/profile in evaluation period		
		$ reagents	$ test-related disposables	$ equipment-related disposables
A	B	C	D	E
1. Blood Culture				
2. Negative	847	$3.60	$.14	$1.78
3.		847 $3.60 = $3409	847 $.14 = $118.58	847 $1.78=$1507.66
4.				
5. Blood culture				
6. Positive	392	$11.85	$.27	$1.78
7.		(add these costs →		
8.		to cost of negative)		
9.		392 $15.45=$6056	392 $.41 = $160.72	392 $3.56=$1395.52
10.	Neg Pos	Neg Pos	Neg Pos	Neg Pos
Totals	847 392	$3049 $6056	$118.58 $160.72	$1507.66 $1395.52

III. TEST LABOR

Time segment per test/profile		Negative Culture	Total FTE minutes/ procedure	Positive Culture	Annual salary + benefits
Preanalytical	Acces/Prep vials	3.65		3.65	$29,344
Analytical	Gm. St./Subcult./I&S	N.A.		18.06	$29,344
Postanalytical	Report/Disp vial	1.64		1.64	$29,344

Total Labor and Cost/Culture 5.29 min. 22.29 min. = $1.06/Neg. Cult. $4.46/Pos. Cult.

See Table 3-12 for instructions.

Figure 2

I. TEST INSTRUMENT

Name: Surgical Pathology Biopsy
Model number: Technicon 300
Manufacturer: Technicon
Purchase price: $12,500

Life expectancy in years: 10
Annual maintenance cost: $750
Site-preparation cost: N.A.
Evaluation period in days: 30
Starting date: 6/1/87
Completion date: 6/30/87

II. DIRECT TEST MATERIALS

Name of test/profile	Total no. tests/profiles	Per test/profile in evaluation period:		
		$ reagents chemicals	$ test-related disposables	$ equipment-related disposables
A	B	C	D	E
1. Surg Biopsy	300	$.49 × 300 = $147	$.44 × 300 = $132	$.07 × 300 = $51
2. (No special stains)				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
Totals	300	$147	$132	$51

III. TEST LABOR

Time segment per test/profile		Total FTE minutes/ procedure		Annual salary + benefits	
		M.T.	M.D.	M.T.	M.D.
Preanalytical	Access/Prep	1.03	—	$29,344	$78,373
Analytical	Gross/Emb/Sect/St	30.0	10.0	$29,344	$78,373
Postanalytical	Read slides		20.0	$29,344	$78,373
	Dictate report	M.T.	M.D.	M.T.	M.D.
	Total Labor	31.03 min.	30.0 min.	$6.20	$18.90

EXHIBIT 14 Work Sheet A *(continued)*.

Figure 3

PRIMARY DIAGNOSIS - PNEUMONIA INFLUENZA A
PATIENT'S CONDITION - STABLE

CASE STUDY: It is January, and the State Health Department has detected the presence of influenza A in your community. A 70-year-old patient is seen in the Emergency Room with a temperature of 102.5F, B.P. 110/70, P 100(reg). His breathing is labored, and breath sounds are reduced bilaterally. He is weak and is unable to walk without assistance. What screening tests will you order to substantiate your clinical impression that the patient has pneumonia secondary to influenza? What therapy will you order to treat him and what tests will you order to monitor your therapy?

TESTS REQUIRED	FREQUENCY	X	COST/TEST	=	COST/HOSPITALIZATION
CBC	**********		$ 2.08		$ 33.28
X RAY CHEST	**********		11.27		169.05
C&S, BACT, BLOOD	**********		29.63 (p)ositive; 12.60 (n)egative		414.82 (p); 176.40 (n)
SMEAR, GRAM, SPUTUM	**********		2.49		24.90
C&S, BACT, SPUTUM	**********		23.18 (p)ositive; 19.36 (n)egative		213.80 (p); 193.36 (n)
BLOOD GAS, ARTERIAL	**********		7.54		75.40
DIFFERENTIAL	**********		3.35		30.15
SODIUM, SERUM	**********	BASIC	1.47		10.29
POTASSIUM	**********	TESTS	1.48		10.36
CREATININE	**********		1.58		11.06
CO2	**********		1.52		10.64
CHLORIDE	**********		1.44		10.08
BUN	**********		1.80		12.60
C&S, VIRAL, SPUTUM	**********	Total $127.03(p)	30.00	$106.18(n)	150.00 $950.37(n)
VIR AB TITR, NOS	********		8.20		32.80 $1209.23(p)
U A W/O MICROSCOPIC	********		2.57		10.28
SGPT	******		2.08		6.24
SGOT	******		1.66		5.40
LDH	******		3.98		11.94
BILIRUBIN, TOTAL	******	DISCRIMINATORY	1.75		5.25
ALKALINE PHOSPHATASE	******	TESTS	1.53		4.59
SED RATE	****		1.48		2.96
INFLUENZA TITER	****		8.20		16.40
C&S, BACT, URINE	****		17.87 (p)ositive; 4.57 (n)egative		35.74 (p); 9.14 (n)
GLUCOSE, SERUM	****		1.31		2.62
C&S, LEGIONELLA	****		13.63		27.26 $157.71(n)
ELECTROCARDIOGRAM	**	Total $111.69(p)	55.63	$98.39(n)	55.63 $184.31(p)

2 4 6 8 10 12 14 16 18 20 22 24 26 28 30 32 34
NUMBER OF TESTS ORDERED

Total Cost per Hospitalization	$1393.54(p) 1108.08(n)
Total Cost/Test/Day	238.72(p) 204.57(n)

*Estimated actual test costs based on data received from VA medical center laboratories; cost will differ in each VAMC

Figure 4

PRIMARY DIAGNOSIS - PNEUMONIA INFLUENZA A
PATIENT'S CONDITION - MONITOR UNSTABLE

CASE STUDY: It is January, and the State Health Department has detected the presence of influenza A in your community. A 70 year old patient is admitted to the hospital with pneumonia. You admitted him four days ago because of a temperature of 102.5 F, labored breathing and reduced breath sounds bilaterally. Chest x-ray revealed bilateral patchy infiltrates. He has not improved, and his temperature is 104 F. His blood pressure dropped to 100/50 from 150/70. What tests will you order to monitor his problems, and what drugs will you order to treat him?

TESTS REQUIRED	FREQUENCY	X	COST/TEST	COST/ HOSPITALIZATION
C&S, BACT, BLOOD	|**********		$ 29.63 (p) 12.60 (n)	$ 740.75 (p) 31.50 (n)
X RAY CHEST	|**********		11.27	180.32
SMEAR, GRAM, SPUTUM	|**********		2.49	34.86
CBC	|**********		2.08	29.12
C&S, BACT, SPUTUM	|**********		23.18 (p) 19.36 (n)	324.52 (p) 271.04 (n)
SODIUM, SERUM	|**********	BASIC	1.47	19.11
POTASSIUM	|**********	TESTS	1.48	19.24
CO2	|**********		1.58	20.54
CHLORIDE	|**********		1.44	18.72
DIFFERENTIAL	|**********		3.35	40.20
BLOOD GAS, ARTERIAL	|**********		7.54	82.94
GLUCOSE, SERUM	|**********		1.31	13.10
BUN	|**********		1.80	16.20 $789.53(n)
CREATININE	|**********	Total $90.20(p)	1.58 $69.35(n)	12.64 $1552.26(p)
SGPT	|********		2.06	8.24
SGOT	|********		1.66	6.64
LDH	|********		3.98	15.92
BILIRUBIN, TOTAL	|********		1.75	7.00
ALKALINE PHOSPHATASE	|********		1.53	6.12
INFLUENZA TITER	|******	DISCRIMINATORY	8.20	24.60
U A W/O MICROSCOPIC	|****	TESTS	2.57	5.14
SMEAR, AFB, SPUTUM	|****		5.06	10.12
C&S, MYCOPLASMA	|****		13.63	27.26
C&S, BACT, URINE	|****		17.67 (p) 4.57 (n)	35.74 (p) 9.14 (n)
VIR AB TITR, NOS	|**		8.20	8.20
ELECTROCARDIOGRAM	|**		55.63	55.63
CYT, SPUTUM	|**		65.98	65.98
C&S, VIRAL, SPUTUM	|**		30.00	30.00 $293.62(n)
C&S, LEGIONELLA	|**	Total $231.75(p)	13.63 $218.45(n)	13.63 $320.22(p)

2 4 6 8 10 12 14 16 18 20 22 24 26 28 30 32 34
Number of Tests Ordered

* (p)=positive (n)=negative

Total Cost per Hospitalization $1872.26(p) 1083.15(n)

Total Cost/Test/Day 303.75(p) 287.50(n)

**Estimated actual tests costs based on data received from VA medical center laboratories; cost will differ in each VAMC

Pathology and Medical Laboratory Services (PA)

Standard	Circle On
PA.1 Pathology and medical laboratory services and consultation are regularly and conveniently available to meet the needs of patients, as determined by the medical staff.*	1 2 3 4 5 N

Required Characteristics

PA.1.1 The pathology and medical laboratory services are directed by a physician who is qualified to assume professional, organizational, and administrative responsibility for the facilities and for the services rendered.*	1 2 3 4 5 N
PA.1.2 There are sufficient qualified personnel with documented training and experience to supervise and conduct the work of the laboratory.*	1 2 3 4 5 N
PA.1.2.1 The director of the pathology and medical laboratory services is a member of the medical staff and, whenever possible, is a pathologist, preferably one who is certified by the American Board of Pathology or has the documented equivalent education, training, and experience.	1 2 3 4 5
PA.1.2.1.1 When a pathologist is not readily available, a physician from the active medical staff assumes the responsibilities and title of director.*	1 2 3 4 5
PA.1.2.1.1.1 This individual is knowledgeable about the laboratory services offered and is available as required by the laboratory staff to render administrative decisions, to provide consultation concerning the medical significance of laboratory results, and to assist in obtaining other required professional consultation.	1 2 3 4 5

*The asterisked items are key factors in the accreditation decision process. For an explanation of the use of the key factors, see "Using the Manual," page xi.

Circle One

PA.1.2.1.2 When a pathologist is not the director, the services of a pathologist are retained on a part-time basis. 1 2 3 4 5 NA

PA.1.2.1.3 When the director is a physician who serves in a clinical supervisory capacity but is unable to supervise the technical aspects of laboratory procedures, appropriate technical supervision is provided. 1 2 3 4 5 NA

PA.1.2.1.4 In large medical centers, a physician with special training, experience, and documented expertise in a specific clinical discipline, such as hematology, immunology, or endocrinology, may direct a laboratory that is primarily associated with the discipline. 1 2 3 4 5 NA

PA.1.2.2 The director is appointed or elected by the process outlined in the medical staff bylaws. 1 2 3 4 5 NA

PA.1.2.2.1 In a departmentalized hospital, the director is appointed or elected by the same process as is any other clinical department/service director. 1 2 3 4 5 NA

PA.1.2.3 When a pathologist is regularly available only on a part-time basis, this individual is a member of the medical staff. 1 2 3 4 5 NA

PA.1.2.4 When the pathologist can provide services only on a consultative basis, these services are provided as often as required, but not less than monthly.* 1 2 3 4 5 NA

PA.1.2.4.1 A written report of the pathologist's evaluation and recommendations is rendered to the medical staff and administration after each consultative visit.* 1 2 3 4 5 NA

PA.1.2.5 The director of the pathology and medical laboratory services establishes an effective working relationship with the medical staff, the hospital administration, and other departments/services. 1 2 3 4 5 NA

PA.1.2.6 A pathologist has an active role in the in-service educational programs of the pathology service and the hospital and participates in medical staff functions as required. 1 2 3 4 5 NA

PA.1.2.7 Within the hospital's overall quality assurance program, the director of the pathology and medical laboratory services assures that the department/service participates in the monitoring and evaluation of the quality and appropriateness of services provided.* 1 2 3 4 5 NA

PA.1.2.8 An exception to physician direction of a clinical laboratory or component thereof may occur in certain highly specialized or clinically compartmentalized hospital laboratories. 1 2 3 4 5 NA

PA.1.2.8.1 In this case, a clinical laboratory or component thereof may be supervised/directed by an appropriate doctoral scientist or by an individual with documented equivalent education, specialized training, and/or experience, unless otherwise provided by law. 1 2 3 4 5 NA

*The asterisked items are key factors in the accreditation decision process. For an explanation of the use of the key factors, see "Using the Manual," page xi.

Department of Veterans Affairs
Veterans Health Services and
Research Administration
Office of the Director, Pathology Service
Washington DC 20420

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